*Vol. 3, No. 1 The HP Portable/Portable Plus/Portable Vectra Users Newsletter January / February 1988*

# THE Portable Paper

## Using the CompuServe HP Forum

## On the Portable Vectra Horizon

## A Comparison of HP110/Portable Plus and Portable Vectra

## A Hardware Fix: Speeding up the Portable Plus

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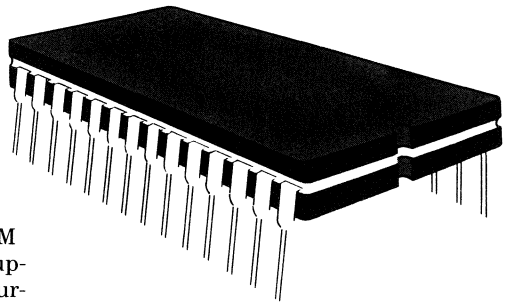
| Portable Paper 2 year | 99 | 99 | 88 | 81 | 70 | 63 | 52 | 45 |
| Portable Paper 3 year | 139 | 139 | 124 | 114 | 99 | 88 | 73 | 63 |
| DOS Tools | 50 | 40 | 36 | 32 | 28 | 26 | 24 | 22 |
| **And ROM Backup** | **179** | **169** | **152** | **135** | **118** | **110** | **101** | **93** |
| Duette | 100 | 90 | 86 | 81 | 77 | 75 | 73 | 71 |
| **And ROM Backup** | **195** | **185** | **175** | **164** | **154** | **149** | **144** | **139** |
| The Editor | 100 | 80 | 72 | 64 | 56 | 52 | 48 | 44 |
| **And ROM Backup** | **195** | **175** | **157** | **140** | **122** | **114** | **105** | **96** |
| Norton Utilities | 100 | 90 | 85 | 80 | 74 | 72 | 69 | 67 |
| Norton Advanced | 150 | 129 | 122 | 114 | 107 | 103 | 99 | 96 |
| PrinterTalk/Format110 | 90 | 60 | 63 | 56 | 49 | 45 | 42 | 38 |
| RightWriter | 95 | 89 | 86 | 82 | 79 | 77 | 75 | 73 |
| **And ROM Backup** | **274** | **268** | **252** | **235** | **219** | **211** | **202** | **194** |
| SHELP | 55 | 50 | 45 | 40 | 35 | 32 | 30 | 27 |
| SideWinder + Utils | 80 | 70 | 65 | 61 | 56 | 54 | 52 | 49 |
| *Shelp+SideWinder Disks* | | | | | | | | |
| **And ROM backup** | **230** | **215** | **200** | **185** | **171** | **163** | **156** | **148** |
| Turbo Pascal | 70 | 65 | 63 | 61 | 59 | 58 | 57 | 56 |
| **And ROM Backup** | **165** | **160** | **151** | **143** | **134** | **130** | **126** | **121** |
| T/Master | 295 | 279 | 261 | 243 | 225 | 216 | 207 | 198 |
| Typing Whiz | 50 | 40 | 36 | 32 | 28 | 26 | 24 | 22 |
| **And ROM Backup** | **145** | **135** | **121** | **108** | **94** | **88** | **81** | **74** |
| Webster Speller | 80 | 70 | 66 | 62 | 58 | 56 | 54 | 52 |
| **And ROM Backup** | **259** | **249** | **233** | **217** | **201** | **193** | **185** | **177** |
| Webster, RightWriter | | | | | | | | |
| **And ROM backups** | **533** | **517** | **436** | **407** | **378** | **363** | **349** | **334** |
| *Shelp+Format110+Editor* | | | | | | | | |
| *SideWinder+PrinterTalk* | | | | | | | | |
| **And SuperROM backup** | **474** | **409** | **368** | **327** | **286** | **266** | **245** | **225** |
| WorldPort 2400 & cable | 389 | 339 | 328 | 316 | 305 | 299 | 293 | 288 |
| 2 Megabyte RAM card | 2995 | 2695 | 2659 | 2622 | 2586 | 2568 | 2549 | 2531 |
| 1 Meg RAM/8 Socket ROM | 1995 | 1695 | 1681 | 1667 | 1653 | 1646 | 1639 | 1632 |
| Used HP110's | 750 | 750 | 695 | 650 | 595 | | | |

**HOW TO ORDER:** Use the chart above to determine the discount price. If you do not find the product you want listed on the chart, contact us for discount pricing. Enter the desired quantity on the order form in the back of this issue, or use company purchase order.

PRICES GOOD THROUGH February 28, 1988

*Great news for Portable Plus users:*

# Our best-selling Portable software now on ROM chips



***Pack your favorite programs into just a few slots in your ROM drawer!***
- ***Save valuable memory space***
- ***Eliminate need for disk drive***
  ***—Custom ROMs available too!***

Now you can simultaneously free up memory space in your Portable Plus and save yourself the trouble of using a disk drive.

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## ROM BACKUP: HOW IT WORKS

Before we could offer software on ROM to our customers, we thoroughly researched the field, locating the most reliable sources of Roms and ROM services. In addition, we have formed special ROM agreements with our leading software suppliers, including Borland International (Turbo Pascal), Simon & Schuster (Webster's Spelling Checker), and Southern Software (SideWinder).

For numerous legal, economic, and logistical reasons, we offer ROMs to you as a Backup Service. This means you may purchase a product on ROM provided you already own the product on disk. (If you purchased a disk product from us—Personalized Software—we have that in our records. If you purchased a product elsewhere, you must show us proof of purchase before we can sell you the ROM Backup.)

Also, it is important that you read and adhere to the licensing agreement that comes with the disk-based version of the software you buy, because the same agreement applies to the corresponding ROM Backup. In most cases, this means you may use the software on only one computer system. Remember, you are buying a *backup* copy of your software, not a second copy.

Having to buy both the disk version and its ROM Backup is not without advantages. For one thing, many disk products include extra utilities that have to be deleted from the ROM chips in order to save space. Also, if your ROM drawer gets full, you can remove a ROM chip and still run the corresponding program off your disk drive.

## EASY TO INSTALL

We supply a ROM insertion tool (makes installation simple), plus clear instructions with diagrams.

## LIFETIME MONEY-BACK GUARANTEE

Our ROM Back-Up Service comes with a lifetime guarantee: If a ROM proves defective at any time—as long as you own the computer in which it is installed—we will replace it at no charge.

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Whatever your reason: to free up valuable memory space. . . to minimize the need for an external disk drive. . .or for sheer convenience, order one or more of our best-selling programs on ROM Backup today.

**To order, enter products and prices in special ROM Backup section at bottom of order form in back of this issue.■**

## SOFTWARE AVAILABLE ON ROM

Here are the programs we're offering on ROM Backup. (For product details, see individual ads elsewhere in this issue.) Note that in many cases you can save space in your ROM drawer by buying two or more programs on the same chip. All our ROMs come with complete, easy-to-follow installation instructions.

**IMPORTANT:** **You must own (or order) the disk versions of any products you buy on ROM Backup. To order, use order form inside back cover.**

| | *Product* | *Notes* | *Size of ROM* | *Prices* |
|---|---|---|---|---|
| | Shelp | Includes improved version of note extraction program. | 32K | $55. |
| | SideWinder | Does not include any of the utility programs that come with the disk-based version of SideWinder. | 32K | $55. |
| | The Editor | | 64K | $95. |
| ★ | HPDuette | Contains HP half of software. | 64K | $95. |
| ★ | HPCalculator | No disk purchase necessary. | 64K | $95. |
| | HPrint | | 64K | $95. |
| | Shelp + SideWinder | Same versions as on 32K ROM chips (see above), plus SideWinder enhancement utility. | 64K | $95. |
| | Sketch | | 64K | $95. |
| | Turbo Pascal | Includes RUN.COM, which can save 10K of disk space from any program you compile with Turbo. | 64K | $95. |
| | Typing Whiz | | 64K | $95. |
| | Best of DOS Tools | Contains selected utilities from Portable Utilities Disk, Vol. 1: DOS Tools* | 128K | $129. |
| | Super ROM<br>The Editor<br>Shelp<br>SideWinder<br>Mini PrinterTalk<br>Format110 | Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk; it is functionally equivalent to PrinterTalk for most applications. Shelp and SideWinder are the same versions as on the 32K ROM chips—see above. | 128K | $149. |
| | Webster's Spelling Checker | Also includes two useful utilites—DiskPacks and New Mode—at no extra charge. | 256K (Two 128K ROMs) | $179. |

*Utilities included in the ***Best of DOS Tools*** ROM Backup are as follows. For program details, see Portable Utilities ad in this issue.

| | | | | | | |
|---|---|---|---|---|---|---|
| PACK | VDL | MOVE | WHEREIS | PRNCONF | TRIM | DIRS |
| CLEAN | TY | TJETA | CHANGE | SDL | FGREP | SQPC |
| COPYNEW | ARCE | RENDIR | ASK | MOVEALL | LABEL | FDUMP |
| DUMP | TMA | OFF | TEE | WAIT | BEEP | SM |
| DIRALL | CYPHER | FCOPY | ARC520 | FDATE | XCOPY | |

**Note:** ARC520 is shareware; the author normally requests a $35 contribution. However, you do not need to send any money. We've already paid your user fee.

★ =NEW

## ABOUT ROMS

A ROM ("Read-Only Memory") is a microelectronic chip that stores programs or other data. Once information is "burned in" to a ROM, it cannot be altered.

A different form of ROM, called an EPROM, *can* be altered once information is burned in. (EPROM stands for Erasable Programmable Read-Only Memory.)

Although blank ROMs are in general less expensive than blank EPROMs, the initial burn-in costs for ROMs are much higher. ROMs also require a much longer lead time to produce than EPROMs. Currently, EPROMs that can be run on the HP Portables come in 16K, 32K, and 64K sizes. ROMs are 128K.

We use EPROMs for our 32K and 64K backup chips, and ROMs for our 128K packages.

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# PUBLISHER'S MESSAGE

*Hal Goldstein*

Welcome to our third year of publishing *The Portable Paper*. This issue portends an interesting year for HP Portable computing. It contains descriptions of future products for the Portable Vectra and outlines one possible hardware upgrade for the Portable Plus.

We will watch to see this year how the Portable Vectra and HP110/Portable Plus families of HP portable computers evolve. In doing so, we will be observing how the portable computing industry as a whole evolves. In this issue we compare the two approaches to portable computing represented by these two HP families.

In an effort to consolidate its marketing, R & D, and manufacturing, the home of HP portable technology is moving from Corvallis, Oregon to Sunnyvale and Roseville, California. In future issues of *The Portable Paper* we will chronicle this move and discuss its effects on HP Portable users.

Allow us to introduce new columnist Paul Grimmer, author of a number of programs written for the HP Portables. In his first column he talks in detail about the HP forum on CompuServe, a service of which all HP Portable users should take advantage.

Finally, we welcome new HP Portable Vectra subscribers. We look forward to providing you with a forum that increases the usefulness of your new machine while at the same time we strive to improve and expand our service to HP110 and Portable Plus users.

Hal Goldstein

# Letters

## Concerns About Prices, Discrepancies

In *The Portable Paper* Vol. 2, No. 4, p. 40, you have a **format c:/z/i4** statement which won't work for me. I have the HP-110 with the HP-9114A but it will not take the "z" or the "i4". It states in the owner's manual that this command should be acceptable, but it isn't in my case. Also, I cannot use the **/W**, **/X**, **/Y**, or **/Z** commands.

I would like to bring up a problem and hope you do not mind. Your subscriber price for the Norton Utilities version 4.0 is listed at $89.95. I found the same software package advertised in PC-Resource for $51.70. I thought you should know about such discrepancies.

This brings up another problem with regard to your prices. There are too many .95's, .99's and 9.95's. Some people are allergic to ragweed; I am allergic to these kinds of prices. These prices are telling me the merchant does not calculate his prices but makes guesses as to how much the buyer will tolerate. The computer field attracts better-educated people (I hope), and they should not be taken for so stupid as not to realize that your utility price of $89.95 really represents a total of $90.

Do you realize what the government could save by not minting those expensive pennies, if all merchants would do away with those nines and include the respective taxes in their prices?

I would be glad to hear your side of the story.

*Dr. August J. Nechi, Stone Mountain, GA*

*[HP110 users must use the* **format** *program on the HP110 supplemental disk. You may either run the* **format** *program from an external drive or load it onto the Edisc and run it from there, and it will work as you described. Plus users have the complete* **format** *program built into their system.*

*As you know only a small percentage of IBM PC software works on the HP110 and Portable Plus. Testing, documenting, and advertising what software works on those HP Portables takes time and costs money. In the case of the Norton Utilities (and most of the IBM PC software we sell) we supply additional 3 1/2" HP formatted disks containing the product, along with pages of additional documentation and advice for HP110, Portable Plus and HP150 users. Supplying an extra 3 1/2" disk with prepackaged software means obtaining special permission from the software manufacturer, which (as is the case with The Peter Norton Company) is often a time-consuming and frustrating process.*

*We do not just move boxes. We add value—if in no other way than by identifying the existence of products for the Portables. We finance and create the software ads, such as the Norton ad, and customize it for the Portables. The purpose of our ads is to sell; but we try to do so by long copy educational ads. That way people understand the value of a product like the Norton Utilities when they might not have another means of knowing. We don't just list one line and a price as in a mail-order ad like the one you mentioned.*

*Also, we do not have millions of potential (IBM PC and compatible) customers; At best, there are only several thousand who know of us. We still sell our products below retail price (with the extras we add), but we cannot compete with large mail-order houses, and don't attempt to.*

*Finally, we offer a 60-day money-back guarantee on all our products—a guarantee almost unheard of in the software industry. Companies like Peter Norton do not back us up on the policy. Therefore, unless a package is returned in new condition (which it usually isn't), we have to pay for the cost of the product when it is returned. We offer that 60-day guarantee because we genuinely believe we have excellent products for HP Portable users, and given that belief, we think we should take the financial risk rather than you. Please also remember our policy regarding shipping charges: we*

*simply don't charge for shipping when a customer's order exceeds $200. This policy is also fairly unusual in the computer hardware/software market, and (given the cost of shipping packages these days) exists only as a cost-cutting service for our customers.*

*As to our pricing, I agree with you to a large degree. Any one of our readers knows that $99.95 is the same as $100. (But doesn't $99.95 sound better than $100?) We want you to be satisfied with the product and feel that you received good value for your money (hence our 60-day money back guarantee). We also want you to buy the product, and allow us to make a reasonable profit. That way we can stay in business, and everybody wins. And despite the high IQ of our audience, to most people $99.95 sounds a little more agreeable than $100.*

*As you point out we do not make strict calculations to determine the price of a product, but try to find a ".95" price. Often that works in the customer's favor as we shave a few more dollars to make the price cutoff. Basically, you are right, we "make guesses as to how much the buyer will tolerate". The more we guess right the more motivated we will be to serve you with new products and services for your HP Portable. -Hal]*

## Converting Portable Plus MS Word 1.1 To MAC MS Word.

I am writing to report success with conversion of a Portable Plus 1.1 MS Word file to Macintosh format. Because the large, complex document I was writing on my Plus required split footnotes, it became necessary to transfer my file to an IBM PC with MS Word version 3.11 (which supposedly supports split footnotes; version 3.01 does not).

After several problems with the IBM (style sheet not transferring, printer not printing), a consultant suggested moving the file over to the Macintosh version of MS Word. To accomplish this we copied the file to the Macintosh using a Dayna FT100 converter, and then used the MS Word 3.01 conversion utility to transform the file into Macintosh form. The whole operation worked almost flawlessly, and all I had to do was change some of the footnote numbers from normal position back to superscript.

The main problem is moving the files from the HP disks to the Macintosh. The problem may be solved soon, as Apple is reported to be developing a ROM to make its 3.5" drives able to read and write to IBM diskettes, and HP is supposed to be making its drives able to format IBM disk ettes. Until then you can use a null modem (described in *The Portable Paper* Vol. 1, No. 6, p. 8) or an external drive like the DaynaFile to do the transfers.

Here are some other questions which occurred to me concerning new products which may be of interest to other Portable users: Has anybody tried one of those new Lotus 1-2-3 compilers, such as the Liberty compiler from SoftLogic solutions, to determine compatibility? What about MousePerfect? Executive WordPerfect also seems to have possibilities as a traveling word-processor.

On the subject of modems, I would find it very valuable to have a chart comparing the various features of the HP internal modem, the WorldPort 1200 and 2400, etc. I imagine that this chart would be accompanied by an explanation of the importance of the various features, such as CRC CCITT, synchronous/asynchronous, full/half duplex, etc.

Notes on a few other products: PC/Tools is an extensive collection of UNIX utilities. Everything worked fine on my Plus, and they say it has been tested on the HP 150. This package is like a giant erector set. It has full-fledged GREP and file comparison tools which allow two and three files to be compared and differences reported. It has two banner programs, and a utility which counts words, lines, and characters. The update is supposed to add 13 new utilities, which would make it 37 tools for $49. The documentation is good, although the orientation of these products is toward the power user. Still, there should be something for almost everyone.

The Mace Utilities have just gone through a major upgrade, and they are still ironing out the bugs. So far I have gotten only a couple of the programs to run, but there have been major fixes since the version I was originally sent, so I am very hopeful. The possibilities are tantalizing. The utilities include disk caching and format recover software for floppy disks, as well as a formatting program which lifts the data off a disk before formatting, and replaces it afterwards. If only this would work for a corrupted Edisc!

I was intrigued by the GO software you described in a previous issue, and I wonder if anyone has gotten a chess program to run?

Because there are so many new products around, choosing peripherals and software for the 110/Plus is becoming almost as difficult as it is for a regular PC; keep up the good work.

*Jonathan Feinstein, Ithaca, NY*

## Using Products in Europe

Thanks again for all the goodies in *The Portable Paper*, the ONLY support I have. It helps me to master my computer. I have several comments and suggestions:

1. HP 9114 Battery:

Would your empowerer also work in Europe with our 220-250 volts? If I could use it with a normal HP 82066B Eurocharger then the problem would be solved. The same question applies for SOS's 9114 Battery Eliminator.

*[Neither product is designed to work with non-US power supplies -Hal.]*

2. "Seven Uses for the Portable Plus" by Srini Nageshwar *The Portable Paper* Vol. 2, No. 5):

Although I take my Portable Plus on my business trips throughout Europe and

*(continued on page 40)*

**THE PORTABLE PAPER**
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POSTMASTER: Please send address changes to Personalized Software, The Portable Paper, P.O. Box 869, Fairfield, IA ½52556.

# Erased your files? Get them back with The Norton Utilities!

## Version 4.0 and Advanced Edition

**"THE NORTON UTILITIES are among the most helpful utilities I've run across. I use them myself every day, and in my opinion, they're a must. Here's why."**

*By Hal Goldstein, Publisher*
*The Portable Paper*

It happens to the best of us. One slip of a finger and a whole week's worth of text or data is past history. *But not if you have THE NORTON UTILITIES*!

Just type **qu** (for quick unerase), give the first letter of the name of the file you erased, and *the file gets restored.* Miraculous as it sounds, in many cases that's all there is to it!

How can a deleted file get unerased?

Simple. The file isn't really deleted in the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.) Without a directory entry, DOS can't find the file, but THE NORTON UTILITIES can.

Now, what about those cases where you can't possibly recover a file because you've already partially overwritten it with other files? Surely THE NORTON UTILITIES can't help you then?

Wrong—they can! THE NORTON UTILITIES won't recover the entire file, of course, but they *can* help you restore the portions of the file that still remain on the disk.

It's done with a powerful utility called **nu** that lets you display, change, and capture to a file any information on any disk. In complex cases you may need to do some detective work, but **nu** will help you find whatever remains on the disk, thereby saving you from countless hours of retyping lost data.

In my opinion, *the ability to recover lost files alone makes THE NORTON UTILITIES well worth the price.* But there's even more to the pachage: THE NORTON UTILITIES are also an excellent *disk management system*. Here are some examples of what you can do:

| RECOMMENDED FOR: | |
|---|---|
| HP110 Portable | ● |
| Portable Plus | ● |
| Portable Vectra | ● |
| HP150 | ● |
| IBM PC and compat. | ● |

Let's say you want to sort directories and files physically on disk—either by name, extension, size, date, time, or by any combination of these. Just use the **ds** (disk sort) command. I use this one to sort my electronic disk files by size all the time. Then when I display the directory, the larger files come at the end of the list, and I can see at a glance which ones to move elsewhere to free up any needed amount of disk space.

Or let's say you remember putting the phrase "a penny saved is a penny earned" into a text file on your electronic, floppy, or hard disk but you can't remember which file it was—or even which directory. How to find it? *No problem.* Just type **ts** (for text search), specify the phrase, and the program will display every occurrence of the phrase, identifying each occurrence by directory and file.

Or let's say you can't remember which subdirectory you put a given file into. Instead of hunting for the file manually, just type **ff** (find file) and specify the name of the file and the directories to search through. The program does the rest.

Other useful features include the **fa** command, which lets you change file attributes (for example, to make erasable files unerasable or vice-versa), and the **fs** command, which tells you the total file size of a group of files (I often use it to find out the total disk space occupied by my Lotus worksheet ".WKS" files or by all my text files from a given project).

"Indispensible."
*PC Magazine*

"Don't compute without it."
*The New York Times*

"You'll bless this disk."
Peter McWilliams
*(The Personal Computer Book)*

**Personalized Software is authorized to distribute THE NORTON UTILITIES on 3½" disk customized for users of the HP110 Portable, Portable Plus, and HP150.**

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are already a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on 3 1/2" disk for users of the HP110 Portable, Portable Plus, and HP150. (All it takes is a few keystrokes to customize THE NORTON UTILITIES to your machine; just follow the simple customization instructions included on the disk.) Also included in our package are the standard 5 1/4" disk sold by Peter Norton for IBM PCs.

We recommend Version 4.0 for HP110 users and HP150 users. We recommend the Advanced Edition of THE NORTON UTILITIES for users who might need to retrieve blocks of text from disks that have become "corrupted" (unreadable by DOS).

THE NORTON UTILITIES are a time-saver for you and a life-saver for your data. Use them just once and you'll wonder how you ever did without them. Order your copy at no risk today.

THE NORTON UTILITIES
DATA RECOVERY
DISK MANAGEMENT

**THE NORTON UTILITIES 4.0 . . . . . $99.95**
**$89.95 for Portable Paper subscribers**

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# 110% Making More of Your HP Portable

by Hal Goldstein

## HP Ships Portable Vectra CS Model 20

HP announced that it is now shipping the Portable Vectra CS Model 20 with a 20-Mbyte hard disk drive and one 3.5-inch flexible disk drive (HP D1009A). The Model 20 complements the Portable Vectra CS offering, which has two 3.5-inch flexible disk drives, and has been shipping since October.

According to HP "The Portable Vectra CS Model 20 is designed for professionals who want desktop capability without sacrificing battery-powered portability. The Model 20 offers the same desktop features as the Portable Vectra CS: a full-sized keyboard with separate numeric keypad, removable 12-inch diagonal LCD display, and I/O slots, with the added capabilities of a hard disk drive.

"The Model 20 is designed for office applications that require the increased speed and storage capacity of a hard disk drive. Office professionals can store large amounts of data and multiple applications on the hard disk drive. In the office, the Model 20 can be used with an external monochrome or color monitor. With up to 4 hours of battery life on a full charge, the Model 20 can be used away from the office for work at home, at another company site, or on the road.

"The durability of the Portable Vectra CS Model 20 has been enhanced by adding extra shock mounting on the hard disk drive and by building in an auto head parking feature. With this feature, the head is automatically parked in the neutral zone of the hard disk after five seconds have passed since the last hard disk access. The head is also automatically parked when the machine is turned off. This improves data reliability and integrity on the hard disk drive."

HP also announced that it is shipping its 2400 Baud internal modem for both versions of the Portable Vectra. The 2400 bps modem can operate in either synchronous or asynchronous modes, and provides Bell 103/212A, CCITT V.22 and V.22 bis compatibility. This fully Hayes-compatible modem supports the Hayes Synchronous Interface (HSI) protocol. HSI is an emerging applications interface used in software development that achieves synchronous communication via software rather than hardware implementation. Several vendors now support HSI in their terminal emulation software, and the list is expected to grow. According to HP "The 2400 bps synchronous/asynchronous modem provides a flexible and cost-effective solution for remote portable-to-IBM mainframe communication."

The Portable Vectra CS Model 20 retails for $3595. Vectra DOS is $95. The 2400 bps modem costs $695.

## The 1988 Portable Paper Subscriber's Disk

As of this writing we have almost finalized the contents (see below) of our 1988 *The Portable Paper* subscriber's disk. If your subscription covers at least one 1988 issue, then you may receive the disk. To receive this software send us $7.50 (that includes shipping and handling) or a self-addressed stamped envelope with a formatted 3 1/2" double-sided disk, and we'll put the software on it. If we promised you the disk for free, (for example, because you renewed early) and you haven't received the disk by the first of February, give us a call or drop us a line, and we'll send it to you at no charge.

Highlights include a format program that allows HP110 and Portable Plus HP9114 users to format 3 1/2" disks in IBM format, an excellent file organizer for the Portable Vectra, Lotus templates, a new Time Manager utility, a Plus MemoMaker patch instituting a destructive backspace key, and much more. There will probably be several additional Vectra-only utilities that will be added. (Thanks go to the authors of the **format** program, from HP Corvallis, whom we trust will be sending us the program as promised.)

Please understand, however, that since the programs included on the 1988 subscriber's disk are public domain, and since they are being distributed solely as a service to subscribers of *The Portable Paper*, they are provided "as is", without promise of any further support. Personalized Software has neither the intention nor the resources to provide any technical support for these programs.

In order to squeeze as much as possible on a double sided 3 1/2" disk, files have been compressed and archived. To "unarchive" a file, one has only to issue the command **arce file** using the **arce.exe** program included on the subscriber's disk. With the exception of **arce.exe** all of the names listed below refer to archive files, i.e., each is a single file with the extension ARC which contains multiple files stored in a compressed format waiting to be "unarchived".

**arce.exe**—Archive extraction program. Use this to unarchive all files on Subscriber's Disk. (110, Plus, Vectra)

**addr**—This program searches the Time Manager address list without starting Time Manager. It displays the complete address list entry, and starts a letter to the person in the default Memomaker file. It can also print addresses for envelopes, and can handle multiple names at the same address with a single address list entry. (110, Plus)

**boole**—Lotus 1-2-3 worksheet designed to be used as a tutorial for computer students on Boolean algebra. (110, Plus, Vectra)

**clockprg**—Graphic clock program. (110)

**compare**—This program displays the differences between two similar text files. It will show you where you have inserted, deleted, or changed blocks of text from one version to the next. (110, Plus, Vectra)

**cursor**—This batch file changes the cursor from underline to box or vice-versa, without having to go

# T/Master—it may be the only program you'll ever need.

## And it may be the most "comfortable" program you've ever used!

It may sound strange to call a computer program "comfortable", but that's the best way we've found to describe T/Master. And the other part is true also: T/Master may be the only program you'll ever need.

That's because T/Master has within it virtually every business application you can think of, including word processor, spelling checker, file manager, spreadsheet, database manager, numerical scratchpad, graph making, data communications, desktop publishing, and even more.

There are, of course, other "integrated" programs on the market that combine a number of applications in one. T/Master, however, is the only integrated program that runs on an HP Portable. In terms of capabilities, T/Master also happens to be one of the best. But that isn't what makes it so special.

You see, T/Master isn't just a very good program. It is an entirely *unique* program. It's one you simply must get your hands on before you can appreciate its incredible richness and elegance—and the sheer thoughtfulness that went into its creation.

### THE HEART OF THE SYSTEM

As with most integrated programs, T/Master lets you share data between applications—for example, you can insert a spreadsheet into a report you're typing, or can take information from a database and move it into a spreadsheet—all without leaving the program.

However, with most other integrated programs, you have to exit the module you're in (e.g., word processor), load another module (e.g., spreadsheet), work in the second module, then "import" the result back into the first module. In addition, each module presents you with different commands, a different environment, and often a different "feel".

Not so with T/Master.

T/Master doesn't have modules in the usual sense. Instead, *almost everything is done using the word processor*; it's the heart of the system. T/Master's different functions (spreadsheet, database, etc.) are, in effect, *aspects* of the word processor that have special powers. Instead of leaving the word processor to create a spreadsheet that you then have to import, you simply create a spreadsheet (with all the computational power you need) right where you are.

Same for a database. Using virtually the same commands as for typing ordinary text, you can set up the structure of the database, enter data, sort, search, generate a report, and insert that report into your document.

And that's why T/Master is so *comfortable*. You always interact with it in the *same* mode, which is basically just to type. And what you type is ordinary text, or numbers, or simple English-like instructions. With T/Master, you're always on familiar territory.

### SPECIAL FEATURES

Here are just a few of T/Master's most special features:

The **word processor** includes over 100 different functions. You activate these either from menus or by means of simple typed commands. On-line help is available at all times. *Highly suitable for desktop publishing*, T/Master's word processor handles text in columns, and lets you view reduced-size layouts of entire pages.

The **spreadsheet** is different from any other. With most spreadsheets, the columns are of a fixed, predetermined width, and the formulas for calculating each "cell" can only be viewed one cell at a time.

With T/Master, *you* specify the column widths and locations, and you type the formulas at the edges of the spreadsheet where you can see them at all times. (Very helpful in getting your spreadsheets to work!)

> **"No other application that I know of matches the power, thoroughness, and simple elegance of T/Master."**
>
> *-David Hughes, Contributing Editor, The Portable Paper*

Also, unlike other spreadsheets, you can imbed explanatory text anywhere you like—another benefit of T/Master's text-oriented approach to program integration.

T/Master's relational **database manager** competes with database-only products like dBase III. It's easy to select and combine data from two or more files, set up cross-tabulations from data on disk, and generate ad hoc reports.

T/Master's **data communications** capabilities include many you would expect to find in sophisticated stand-alone communications programs. Yet they're easy to use even if you've never done data communications before. (Note: our version of T/Master has its data communications portion customized to the Portable Plus.)

T/Master includes a **"DO" command** that lets you string other commands together and execute them sequentially (in "batch" mode) without intervention.

It is surprisingly simple, for example, to set up a DO command that will perform the following functions at the end of every month: Compile data from selected databases, construct a bar graph, insert the bar graph into a monthly report, and address copies of the report to a selected list of recipients.

When you realize that you can orchestrate all this by means of a single DO command *entirely automatically*, you begin to see the incredible productivity and power that T/Master offers. At only $295 for the entire package (or even less if you're a Portable Paper subscriber), T/Master is easily the best software value available.

### HOW COME I HAVEN'T HEARD OF IT?

The T/Maker Company, developer of T/Master, chooses to remain small. They do not advertise, but prefer to let T/Master be known by word of mouth. This has worked well because of the high level of user satisfaction: According to a recent survey, 12 out of every 13 T/Master users "highly prefer" the program over other integrated packages they're familiar with.

T/Master is widely distributed in Europe and the Far East, where it is bundled with IBM PC compatible computer systems.

### NOT FOR EVERYONE

T/Master is not for everyone. The T/Maker Company has told us that their most satisfied users are computer-oriented people for whom increased productivity is important (as opposed to casual computer users who might not appreciate the time and effort T/Master can save them, let alone its elegance).

If your computer is an important part of your work life, and if you're willing to learn a new—and much easier—way of functioning, then we urge you to try T/Master for yourself. If, within 60 days, you feel T/Master is not for you, simply return it for a full refund.

But remember, T/Master must be *experienced*. It has a unique way of doing things and a "feel" that's all its own. Order T/Master today. It may change the way you use your computer.

**T/Master**
**(For Portable Plus, Portable Vectra, HP150).....$295.00**
**$279.95 for Portable Paper subscribers**

**T/Maker**
**(HP110 Portable).....$295.00**
**$199.95 for Portable Paper subscribers**

**PORTABLE PLUS USERS**
You'll need 296K of main memory to run T/Master, plus 135K Edisc space for the core system, plus the following amounts for storage of the various parts: word processor: 53K; speller: 151K; database and spreadsheet: 135K; data communications: 35K; chart making: 52K; misc. utilities: 60K. You can, if you wish, run the various parts of T/Master off your external disk drive.

**HP110 USERS**
**T/Maker**, an earlier version of T/Master, runs on the HP110 Portable with an external disk drive. The program runs beautifully. T/Maker doesn't support data communications, but it does include word processor, spelling checker, database, spreadsheet, scratchpad, and simple bar charts. It is easily the most comprehensive program available for the HP110.

| RECOMMENDED FOR: | T/Master ↓ | T/Maker ↓ |
|---|---|---|
| HP110 Portable | | • |
| Portable Plus | • | • |
| Portable Vectra | • | |
| HP150 | • | |
| IBM PC and compat. | • | |

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through system config. (The box cursor is almost always preferred.) (110, Plus)

**expenses**—The travel expense report worksheet is a Lotus 1-2-3 **wks** file designed to meet the needs of HP employees and others who must record their company travel expenses. (110, Plus, Vectra)

**formibm**—allows HP9114 to format 3 1/2" disks in IBM format. (110, Plus)

**hangman**—Simple HANGMAN game implemented as a rather complex Lotus 1-2-3 **wks**. Studying this **wks** file will give you tremendous insight into Lotus macros. (110, Plus, Vectra)

**hpilstuf**—This utility allows you to rename the printer and plotter device from names that come with the HP82973 Portable DeskTop Link card (PDL) to names popular software recognizes (e.g. from **hpilprn** to **prn**). (110, Plus)

**input**—This tiny COM file adds interactive abilities to your batch files. (110, Plus, Vectra)

**jetctrl**—memory-resident program that allows you to configure your ThinkJet, QuietJet, PaintJet or LaserJet printer while in the middle of any program. (Plus)

**landmine**—This is a game in which you try not to be blown up by landmines while crossing the playing field. (Plus)

**mm**—This program makes the backspace key work properly in MemoMaker on the Portable Plus. (Plus)

**newmode**—Puts the HP110 or Portable Plus into alternate screen and console mode without selecting System Config from the main PAM applications menu. Alternate mode is required by many programs that use function keys or display line-drawing characters. (110, Plus)

**off**—Turns the Portables off from DOS. (110, Plus)

**offplus**—Reports battery status, turns the Plus off, and secures it. (Plus)

**pass**—This program provides password protection to prevent unauthorized person from logging on to your Portable. (110, Plus, Vectra) **patchtm** —Modifies Time Manager so it will have a block cursor rather than an underscore cursor. (110)

**pcboss**—Excellent disk management program. (Vectra)

**pcrun**—runs programs on the Portable Plus in a way that slightly increases its compatibility with IBM PC's. (Plus)

**playit**—This set of Turbo Pascal procedures shows you how to change the frequency and duration of the beeper on the Portable Plus and also how to change the frequency on the HP110. With these techniques, you can play music. Those who own Portable Pluses should find the sample amusing. (110, Plus)

**ppterm**—PPTerm allows efficient XMODEM and ASCII file transfer, customized especially for use in CompuServe as well as features like user-defined function keys and stored configurations. Compatible with MH-BBS key files. (Plus)

**prnconf**—This utility sends an HP-IL ThinkJet printer what it requires to emulate an Epson printer. (110, Plus)

**qix**—This program plays the game of QIX. (Plus)

**rb**—Re-boots the Portable Plus. (Plus)

**rdtest**—RAM disk diagnostic program for the Portable Plus. (Plus)

**reflect**—This archive contains several command files for use with Reflection and the HP3000 (Plus)

**sci**—Small C Interpreter (110, Plus, Vectra)

**scope**—HP-IL Analyzer program. (Plus)

**scrsize**—Changes the screen size for HP110 dBASE II to fit the Portable Plus. (Plus)

**ser**—Displays the serial number. (110, Plus)

**stat**—Lotus 1-2-3 Statistics Template for the HP Portables This program generates statistics in Lotus 1-2-3. (110, Plus, Vectra)

**stk**—DOS command editor. (Plus)

**tm**—Converts the name and address from Time Manager files to the form required by Executive Card Manager. (Plus) **xmodem**—XMODEM for the Portable Plus. (Plus)

**yahtze**—Yahtze game. (110, Plus, Vectra)

## New HP Portable BBS On Line January 1

*by David Speltz, SYSOP*

Readers of *The Portable Paper* will be glad to know that a Cleveland-based computer bulletin board has installed a section for HP Portable users only. With financial help from Personalized Software, (publishers of *The Portable Paper*), the forum will operated by Sergio Biguzzi of New York, (a steady contributor to *The Portable Paper*), and by this writer. There are no fees for use of the board. The board operates 24 hours a day and may be accessed through either of two telephone numbers, depending upon the baud rate you are using. These numbers are:

300 or 1200 baud - 216-942-6382

1200 or 2400 baud—216-942-7516

WHAT CAN BE ACHIEVED WITH THE BOARD?

The primary purpose of the board will be to provide a means for Portable users to lend support to each other. The board should also be a field for continuous search and testing of software that will operate on the Portable Plus and 110, especially public domain programs. It will provide bulletins of interest to Portable owners and will offer a file system that permits the uploading and downloading of public domain software.

We expect that the forum will be geared to the novice as well as the expert and hope that, in its way, it will be (in the absence of a Portable user group in your area) your national user group.

The forum is part of a BBS called the Cleveland HAMNET (a national bulletin board serving amateur radio operators). Several of the HAMNET users, including its SYSOP David Speltz, are Portable owners. Piggy-backing on this system reduces the operating costs and manpower requirements to a minimum. If it is successful, a dedicated system could be developed at a later time.

The system differs from CompuServe in that it is accessible to all users (not just CompuServe members), there is no fee, and the forum will be dedicated exclusively to HP Portable users.

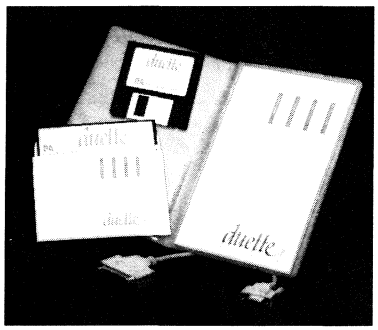
Here is how to log on the system:

LOGGING ON THE NEW BOARD

We suggest you set your communication parameters to **8,n,1** so that you can download binary files (software) using XMODEM. **7,e,1** will work but you can only download text files with this setting.

# duette

***it transfers files both ways between your HP Portable and your desktop computer <u>without</u> an HP-IL card!***



An HP-IL card inside your IBM PC or compatible computer lets you transfer files to and from your HP portable computer.

It's a good solution to the data transfer problem, *provided* you only use one desktop computer. But if you ever need to transfer data between your Portable and someone else's desktop computer, you're stuck—or at least you were until now.

Because now there's a way to do it with software.

It's a program called Duette. Together with a special serial connecting cable that it comes with, Duette is all you need to transfer files at high speed both ways between your Portable and any IBM PC compatible desktop.

Duette performs complete error checking during the transfer process to ensure data integrity. It handles multiple-file transfers, subdirectory transfers, and DOS "wild card" usage. It lets you use DOS commands such as type, list, rename, and erase without having to exit the program. And it transfers data *faster* than you can with an HP-IL card.

Duette is easy to use too. Simple menus and easy-to-understand help screens are available at all times.

For true convenience in file transfer to and from your Portable Plus or Portable Vectra, order Duette today.

**Duette 2.0 with cable (for Portable Vectra) $59.95**
**$56.95 for Portable Paper subscribers.**

**HPDuette with cable (for Portable Plus) . . $99.95**
**$89.95 for Portable Paper subscribers.**

| RECOMMENDED FOR: | Duette 2.0 ↓ | HPDuette ↓ |
|---|---|---|
| HP110 Portable | | |
| Portable Plus | | • |
| Portable Vectra | • | |
| HP150 | | |
| IBM PC and compat. | • | • |

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duette comes with a serial cable and two disks; you load one disk into your portable computer and the other into the desktop. There are two models to choose from:

**Duette Version 2.0** is for the HP Portable Vectra. It transfers data at 115,200 baud as well as at lower baud rates. To use Duette 2.0, you'll need to install an HP serial adapter card (available from Hewlett-Packard) in your Portable Vectra. You connect this card to the serial port on your desktop computer using the serial cable that comes with the program.

**HPDuette** is for the Portable Plus. It transfers data at 57,600 baud. To use HPDuette, you connect the 9-pin serial port on your Portable Plus to the serial port on your desktop computer using the serial cable that comes with the program.

Duette and HPDuette are registered trademarks of Platte River Associates, Inc.


You may call in at 300, 1200, or 2400 baud. Be sure to use the right telephone number. Once on, you will be asked to answer a short questionnaire and to register. Do not use aliases since the information you provide must be valid. To join the forum, enter at the main menu the following command: **J;HPORT** and enjoy!

## Reader Survey—Initial Findings

We thank so many of you (over 15% and they are still coming in) for completing and returning the survey enclosed with the last issue. We haven't had time to properly enter and analyze all the data. However, here are some general impressions gleaned from reading through all of the responses we've received so far:

Overall, you like *The Portable Paper* quite a bit. On a scale of 1 to 10, the vast majority gave The Paper a rating of 9 or 10. You found the mix of reviews, products, and technical and non-technical articles satisfactory. Most of you don't mind that we sell many of the products which we review, especially given our sixty-day money-back guarantee and our policy of encouraging and printing independent, honest assessment (both positive and negative) of the products.

You liked the physical quality of the paper used since many of you re-read the issues. Your biggest concern was that supporting the new HP Portable Vectra might mean we would cover the HP110 and Portable Plus less. HP110 users expressed this most acutely.

Your satisfaction with our products varied. I was surprised at the variance in reader opinion of three of my favorite products: Shelp, The Editor, and The Norton Utilities—some of you really liked these (9's and 10's), and others were only mildly satisfied (5's and 6's). Almost all of you were very satisfied (8's through 10's) with our spelling checkers (Webster—Portable Plus, The Word Plus—HP110). Satisfaction ratings were lowest (5's through 8's) for the Portable Mouse system and Project 8,9,10.

Responses received to date are saying you find prices of *The Portable Paper*, products, and ROM's in the range from reasonable to too high. Many of you did not like the idea of having to "pay twice" for the software, once on disk, the other on ROM.

You are generally satisfied with our service, but there was mention of delays in receiving some of our products such as the Webster and Super ROM's. Not that many of you were interested in paying a $50 subscription fee for a bulletin board devoted only to Portables. Price was an important issue in determining whether or not to buy products made by Hewlett Packard from us.

Overall, you seem to appreciate our existence and our mission, which is to support the HP Portables with products and services. You also seemed tolerant of our mistakes.

We are still compiling the data from this survey, and if you haven't yet responded, please do—we want to hear from as many of our subscribers as possible!

## New HP-IL Link Software

A new revision E of the software for the HP-IL Portable To Desktop card should be available from HP in January. This version will work in HP Vectra desktops and other IBM PC compatibles that operate at 12Mhz or greater. In addition,

*(continued on page 38)*

# ·PORTABLE· PROFILES

*Let us profile your or your company's use of the Portable. Tell us about your interesting or unusual application of The Portable. Or share a description of how you use The Portable: let other readers benefit from your experience. Give us a call (ask for Hal), or send us a draft on paper, disk, or via CompuServe. (Personalized Software, P.O. Box 869, Fairfield, IA 52256, 515-472-6330).*

## Helpless Without My HP

*by Satch Carlson*

*The author, Satch Carlson, is a professional writer. We've enjoyed his off- beat letters, and we think you'll enjoy the following, which he wrote for the* Anchorage Daily News.

It was horrible, I tell you. Hobble! HARBLE! I hadn't felt so helpless, so lost, so ineffectual since...well, since Mary Lou turned me down for the prom, I guess.

But this was worse.

My computer crashed.

Oh, I hear you smiling, I see you snickering: serves him right, this unwitting tool of modern technology. But you would not sneer if you realized how completely dependent I have become on an HP110, which has owned me—they're like cats, these things: they sneak in and take over, and the question of who owns whom is always open—since the summer of 1984. Since then we have been inseparable, Hewpie and I, so it was with a sense of horror and betrayal that I watched the screen flicker and fade last week.

I tried everything, including prayer, to stave off the inevitable conclusion: Hewpie had succumbed, turned tummy up, tossed in his chips, and gone to that great matrix in the sky.

And the little varmint didn't go alone, I'll tell you.

See, what you do is, when you live with a computer, especially one that accompanies you to Yurrup, to Norway and Finland, to Canada, even, is you tend to accumulate stuff, information of all sorts, which lives quite happily in the innards of this nine-pound, Boswellian recording secretary: the beginnings of poems, for instance. Several stories in their earlier stages. A couple of finished pieces waiting to be squeezed through the telephone lines to newspaper and magazine computers. Names, addresses, and phone numbers of people I know and some I don't. All gone in an instant, gone forever, vanished into the ethereal void.

Numb and unbelieving, I pushed this and that button, went away and left him alone for awhile, offered him little plates of food.

Nothing. So finally, after an endless weekend—you'd think there would be computer emergency rooms, wouldn't you? - I hauled poor Hewpie down to Lewis & Lewis, the people who *understand* such things, and Chris Erickson calmed my anxiety as he began critical surgery with a pair of REI folding pliers and a Swiss army knife. Gently peeled my clutching fingers from Hewpie's case. Sent me home to bite my nails and await developments.

A day later he called with a hopeful prognosis: The patient would pull through. Eagerly I rushed over to pick up my little friend.

But first Erickson wanted to tell me about Hewpie's innards.

I stood there feeling like somebody who has neglected his dog or children as he began listing a bewildering array of abuses. "I cleaned out something white," he said. "Looked like somebody spilled milk through the keyboard maybe." Milk? I drew myself up in haughty indignation. Granted, there have been a few of the basic food groups consumed in close proximity to this machine, and I admit I once spilled Nalley's hot chili on the screen, but *milk*? Never.

"Speaking of the keyboard," he said, "it was sort of torn loose from its mountings, like maybe something heavy was dropped on it. Or somebody *stepped* on it." His


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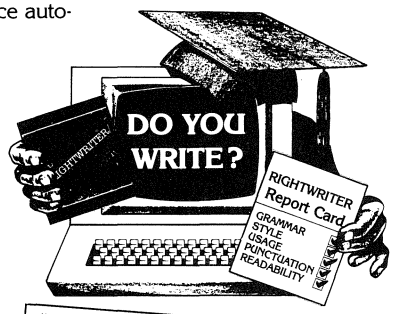


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| RECOMMENDED FOR | |
|---|---|
| HP110 Portable | ● |
| Portable Plus | ● |
| Portable Vectra | ● |
| HP150 | ● |
| IBM PC and compat. | ● |

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look of gentle reproof suggested that we know who that somebody might be, don't we? But I assured him that I am not in the habit of stomping on the keyboard, even in the depths of writer's block, though I will confess my touch on the keys is not as light as, say, that of someone who knows how to type.

"And then there were the chips that were loose in their sockets," he said. "We don't see much of that, unless the machine is turned upside down and slammed against something..." Well, there was the time, I admit, that Hewpie and I were in a sort of minor automobile accident, during which the car rolled four or five times on its way to becoming foil, but it is not true that I kicked Hewpie in disgust when I saw that he was getting off scot-free while I had a few broken ribs. I was tempted, yes, but distracted by a broken shoulder blade.

"I'd say," Erickson concluded, "that this machine has seen a few miles." Well, yeah. And not all of the roads were paved, either.

But now we're back together, my little electronic buddy and I, getting to know each other all over again. The relationship is a little strained, of course, as I sit here trying to remember whose phone number I had in which file, trying to rewrite some stuff that came easily the first time. It's not that I've lost my faith or anything, nor do I now mistrust my faithful companion; it's just that I've found another dimension here, a streak of maverick independence, and it will take me a while to get back to the point where I can put anything into this machine without a subtle, nagging feeling that some day Hewpie might decide on his own to go and...

# Plus notes

## No HAL Or Most Other Lotus 2 Add-Ons For Plus

Mark Horvatich, HP Forum CompuServe Sysop, 76703,4163, tells us that HAL and most other Lotus 2.01 add-on products will not work on the Portable Plus. He says, "HAL makes several patches into 1-2-3 in order to work, and since 1-2-3 is on a ROM, it cannot make those patches (write to the ROM chip). In addition, HAL requires that a standard-format 123.CMP file exists, and this file is not directly on the Portable Plus ROM.

"If it were my decision on how to put 1-2-3 on a ROM, I would have put the loader and a complete driver set into ROM, and have this loader read the 123.CMP file into RAM. Of course, this would have made the memory usage about 60K greater, but EVERY add-in and add-on product that follows 'LDC rules' would have run on this type of ROM. Oh well....

"By the way, I would like to write an article for you about 1-2-3 release 2.01 for the Portable Plus. There are several things wrong about the port to the Portable Plus that I'd like to address, like the fact that HAL and many 1-2-3 add-ins will not work with this version. I'd also like to make a few suggestions on how to fix this problem, and perhaps provide a list of add-ins that are known to work on the Portable Plus."

## 128K Byte EPROM's

Mark also tells us that Hitachi has created 128K EPROM's which will work on the Plus. This is potentially good news for HP Portable Plus users. What this means is that users can have custom EPROM's which can hold up to 256K of programs or data for their Plus (using a pair of 128K EPROM's). Previously, a company such as Hewlett Packard or us, Personalized Software, had to order 500 ROM's at a time to get one 128K ROM.

Reader Sergio Biguzzi has recently tried to track down the chip and tells us that Hitachi has not put the part on their price list so it is not available. The chip cost will be around $80, which means a retail cost of $150 to $200 to have the chip made. Machines to burn 128K EPROM's probably cost well over $2000.

Mark says, "Here's the scoop about the 128K EPROM's. Just before I left HP, a Hitachi rep came in and passed out 5 samples of a 128K EPROM that they had developed. It was a 28 pin CMOS version, compatible with the Portable Plus. I have the one sample I received in a Portable Plus, and it works just like the 128K ROM's. From what Sergio has since told me, I can only assume that Hitachi has had start-up production problems with the part, since Hitachi will not recognize its existence over the phone. The rep quoted an initial price of $82.30 for small quantity purchases, and a price break of 25% for 20-250 unit purchases.

"These EPROM's are brand new. That's the reason for the high cost. There's no doubt in my mind that, if you wait 3-6 months after they are on the price list, you could get the EPROM's for under $30 apiece, and most EPROM burners will be modified to accept these new EPROM's. This is just speculation, though."

## On The 1 Meg RAM/8 Socket ROM and 2 Megabyte RAM Front

Several large corporations have shown interest in the Soft-Word 1 Megabyte RAM/8 socket ROM card and the Soft-Word 2 Megabyte RAM card. These corporations asked HP Corvallis to evaluate the cards. We sent HP the cards and Corvallis now has given them its stamp of approval.

There is a new version of the 2 Megabyte RAM card that we'll call the A/C-drive version. The A/C-drive version only works with a Portable Plus with 512K internal memory. 1 Megabyte of the A/C drive gets added to the existing A drive memory, and 1 Megabyte becomes a C drive.

Finally, we will do our best to hold the prices of these memory drawers at the existing rates. We are already discounting them significantly off the suggested retail prices. Our problem is the dollar has dropped quite a bit against the English pound. Our volume pricing will increase slightly.

## Delays In HP 1 Megabyte Drawers, Personalized Software ROM's

HP will not be shipping 1 Megabyte RAM drawers to dealers or end users until at least January 15. Apparently, a large order depleted their inventory.

Personalized Software will not be shipping Webster Spelling Checker ROM's or SuperROM's until the beginning of February.

RIGHTWRITER CANCELLED
The RightWriter ROM's have been cancelled due to an indefinite delivery date from the ROM supplier.

## WordPerfect On ROM—On Hold

WordPerfect 4.2 will not fit on two 128K ROMs (10K too large). In recent discussions with WordPerfect they told me that it would be a major project to trim down their program and they would not be able to undertake it. They would be willing to have us put 4.1 on ROM, but there are still some technical problems to surmount. We will put the project on hold unless some company wants to order at least 100 WordPerfect on ROM's from us, or until 128K EPROM's become available at a reasonable price.

## dBASE III Clone And Compiler Might Work On Plus

We have some reason to hope that dBXL, a dBASE III clone will work on the Portable Plus—apparently it does work on the HP150 using the PC emulator. WordTech, dBXL's publisher, also puts out a dBASE III compiler known as QuickSilver, which reportedly runs on the Plus.

We received review copies a day prior to our editorial deadline. The initial results were a bit disappointing, but we are not yet out of luck. The install program assumes your A drive is a floppy and makes it impossible to install on the Plus. We will be talking to WordTech about a workaround. The other problem is the program requires lots of disk space: 512K internal memory and 512K for programs. Hopefully, we'll have better news next issue.

## Backing Up Plus

The blessing of 1 and 2 Megabyte RAM disks has created a problem. Has anyone come up with a satisfactory way of backing up these larger RAM disks onto a 700K 3.5" floppy? Many readers have inquired.

## Speeding Up The Portable Plus

*By Sam Chau, 1200 Murchison Dr., Millbrae, CA 94030, (415) 692-8710*

*[In this article Sam Chau outlines a method for speeding up the Portable Plus' processing speed by switching CPU's. Unless you really know what you are doing, don't even think of doing this upgrade yourself. Once you physically alter your machine, all HP warranties are VOID. Furthermore, HP is under no obligation to repair your machine even if something totally unrelated to the modification eventually occurs.—Hal]*

Now that HP has announced the Portable Vectra CS PC, you might assume that it will be the fastest portable HP has introduced, right? Not if you know how to improve your Portable Plus to outrun the Portable Vectra CS PC. Yes! It can be done. The Portable Vectra CS PC sports a NEC V30 microprocessor running at 7.16 MHz. The Portable Plus has a Harris 80C86 microprocessor running at 5.33 MHz. It turns out that with a relatively simple hardware modification, the 80C86 in the Portable Plus can be changed to a NEC V30, and after that the CPU clock can be speeded-up from 5.33 MHz to 8 MHz with just a few wires and absolutely no further component changes.

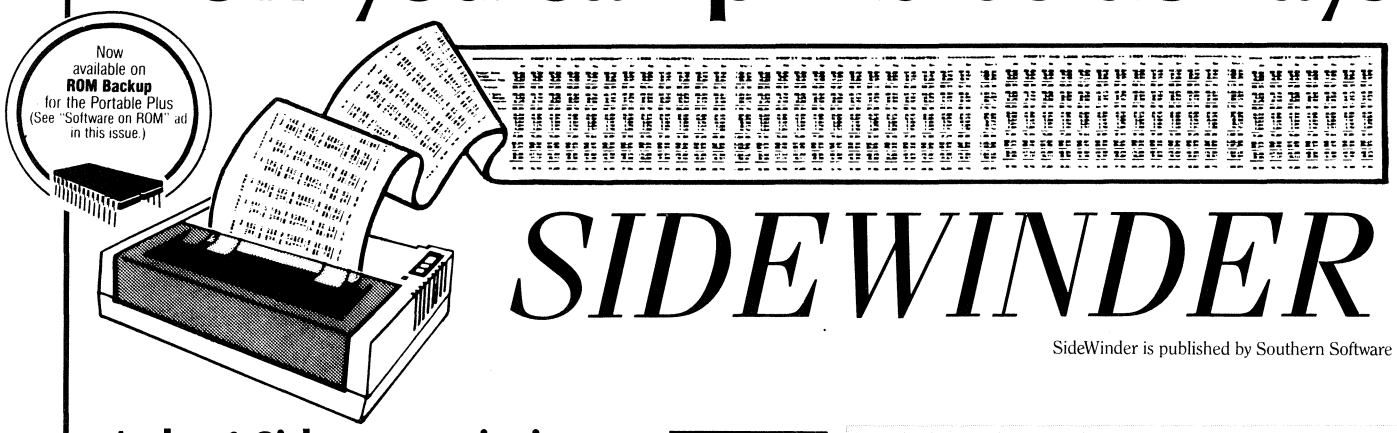
CHANGING THE MICROPROCESSOR
A careful timing analysis of the Portable Plus hardware has indicated that when equipped with the proper V30 microprocessor, the machine can sustain an 8 MHz clock and still have a reasonable margin of safety remaining. Of course the 80C86 CPU used in the Portable Plus is specified to run only at 5.33 MHz, so simply cranking up the clock would not work. The CPU must be replaced. If an 8 MHz version of the 80C86 is available, it will certainly suffice. Yet there is an even better method. Since the NEC V30 is both object-code and pin-compatible with the Harris 80C86, the former can directly replace the latter. The 8 MHz version of V30 will meet all the requirements. In fact, because the V30 executes most instructions in fewer clock cycles compared to the 80C86 and thus essentially runs faster, a speedup of about 20-40% will result just by changing the CPU in the Portable Plus to a V30. From there, another 50% more speed can be obtained by altering the CPU clock from the original 5.33 MHz to 8 MHz. As an indication of the increased performance, the unmodified Portable Plus reports a Norton SI rating of 1.2-1.3, whereas the same machine with an 8 MHz V30 yields an SI rating of 4.4. Given that the SI routine can be somewhat optimistic, the actual performance figure is closer to 2X.

The hardware modifications to speed up the Portable Plus are quite straightforward. For one thing, the cover screws are not hidden under plastic labels, as in the case of the HP110. Replacing the CPU simply involves isolating the CPU board from the case, de-soldering the Harris 80C86 chip carefully from the board, and soldering a NEC V30 microprocessor in its place. There is no room for an IC socket, but it is preferable to have the new chip soldered in place anyway, since that eliminates the possibility of intermittent contact between the chip and the socket, which can cause a variety of unpleasant problems.

SPEEDING UP THE CLOCK
Speeding up the clock from 5.33 MHz to 8 MHz is also quite straightforward. There is no need to change any components. The clock generator circuit obtains a 16 MHz signal from the crystal and divides it by 3 to yield the regular 5.33 MHz CPU clock. The clock chip also feeds an undivided 16 MHz clock to a binary counter which generates 8, 4, 2 and 1 MHz signals, the latter two of which are used by various circuits. The 8 MHz output from the counter, normally untapped, will now be used to drive the V30 CPU. This clock signal also has the 50% duty cycle required by the V30. The Harris 80C86 requires a 33% duty cycle clock which will now be left unused. The modifications only involve lifting two IC pins and two wires. They will be described later.

I have tested the speeded-up Portable Plus with a 384K RAM drawer and a fully-loaded ROM drawer with absolutely no problems. A recently acquired 1 MB RAM drawer also checked out fine at the higher speed. All programs ran as before, and those that write extensively to the LCD (such as DIR and TYPE) ran noticeably faster. I would expect power drain on the batteries to be somewhat higher, and the accuracy of the PAM battery gauge will be off to a certain degree. The best way to compensate for this is to burn a new config EPROM for the Portable Plus, with the power drain constants adjusted according to actual

# No more cutting and pasting- Now you can print it sideways!




# SIDEWINDER

SideWinder is published by Southern Software

## At last! Sideways printing for the HP Portable, Portable PLUS, and ThinkJet!

(And the HP150, Vectra, IBM PC, MS-DOS computers, and most HP graphics printers.)

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| Portable Plus | ● |
| Portable Vectra | ● |
| HP150 | ● |
| IBM PC and compat | ● |
| Available on ROM Backup for the Portable Plus | |

It's called SideWinder, and it's perfect for Lotus 1-2-3 print files, MemoMaker files, or any other text (ASCII) file that's too wide for a normal page.

Just type in the file name, and SideWinder does the rest, printing up to 53*rows *sideways* - for as long as your paper supply lasts. You'll never need to cut and paste again!

SideWinder's high-quality graphics characters are indistinguishable from ordinary characters, and SideWinder prints just as fast as your ThinkJet can.

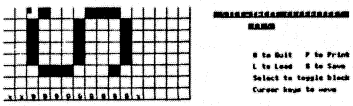
In addition, a built-in mini text editor lets you get inside your print files and easily create **double-width** characters and underlines.

**SideWinder . . . . . $69.95**
***$59.95 for Portable Paper subscribers***

SideWinder 1.01 owners may upgrade to current version 2.01, which supports 8 chars/inch, by sending Personalized Software $7.50 or by mailing a self-addressed $.39 stamped envelope and the SideWinder master disk.

**OPTIONAL EXTRAS:** Southern Software of New Orleans, creators of SideWinder, have also created two companion utilities that work only on The HP Portables:

**SideChar** lets you create your own sideways characters.



Simply fill in a grid on your Portable to modify SideWinder's built-in characters. . .create italics. . . Hebrew letters. . . integral signs. . . whatever sideways characters you wish.

**Sketch & Print** lets you make line drawings on your screen using the cursor and function keys.

It's a lot like those Etch/Sketch toys you played with as a child. (Actually, it's even better because you can draw not just horizontal and vertical lines, but also *diagonals* with a single key.) Sketch & Print also lets you print - and save - anything you draw on the screen.

**$10 for both utilities when purchased with SideWinder**

For a *complete* graphics software program, see ad for "Sketch" in this issue.

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*105 rows for QuietJet Printer

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measurements. Short of that, the battery level at which the LOW BATTERY! warning comes on can give an idea what the actual fuel level should be, as opposed to the inaccurate reading displayed.

SPEED-UP NOT APPLICABLE TO THE 110

Currently, the Portable Plus speedup modifications described here do not apply to the HP110, even though both use the same CPU. The reason is that HP had taken the liberty to use an undocumented 8086 instruction (POP CS) in the HP110 operating system code. The POP CS instruction does work properly in the Harris 80C86, but only as an undocumented feature. As a matter of fact, the opcode used by POP CS is reserved by Intel and is not considered a proper opcode by the 8086. If a NEC V30 is put into the HP110, the POP CS instructions in the OS code will crash the machine erratically, since the V30 not only does not support the POP CS opcode, but uses it for a new class of instructions not found in the 8086 family. Experimentation has shown that a HP110 with a V30 will crash whenever the serial port or the modem is accessed. This is most unfortunate. I have put in some effort to locate all the undocumented POP CS instructions in the OS code, but have not come up with a scheme to replace them yet.

Until then, it is not possible to extract higher performance from the HP110, other than expanding its memory. Of course, the Portable Plus does not suffer from this limitation.

USE PROPER TOOLS AND THE PLUS SERVICE MANUAL

The following is an outline of how to speed up the Portable Plus. Even though the modifications are quite simple, they should not be attempted by those who lack confidence in handling IC's and soldering tools. By all means

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The HP Portable Typing Tutor

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Typing Whiz is one of the better typing programs on the market and is priced competitively. If you want to learn or improve your typing, buy Typing Whiz. Typing Whiz is on my highly recommended list.
*—Dave Mark, L.A. Scrug Notes, newsletter.*

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have a competent person do it if you do not have the proper tools or the expertise. The toolset is the same as that required for the HP110 RAM expansion project described last issue : Grounded, temperature-controlled soldering iron with narrow tip and set at 700-750 degrees F; Low-static solder sucker or vacuum-powered desoldering station; Anti-static workstation mat with wrist strap; Flux core solder, preferably with water-soluble flux; TORX T-8 screwdriver; Tweezers; Needle-nose pliers, Small flat-blade screwdriver; "X-acto" knife; Wire stripper; IC extractor; 28 or 30-gauge insulated wire-wrap wire.

The Portable Plus service manual, part # 45711-90025, contains schematics and component-locator diagrams to help find IC's on the main circuit board. It also contains detailed disassembly and re-assembly instructions which should be strictly followed to avoid damaging the machine. The service manual is also an excellent technical reference since it contains a chapter on functional description.

Procedure:

1. Disassemble the Portable Plus and isolate the main PCA.
2. Locate the 40-pin Harris 80C86 microprocessor and carefully un-solder it.
3. Solder an 8 MHz NEC V30 microprocessor in the now-empty CPU socket. Make sure the orientation of the chip is correct before soldering.
4. Locate IC U6 on the board. It is a Harris 82C84 clock generator chip. (18 pins.) Un-solder and lift pin 8 off the IC pad on the PCA. It may be necessary to cut the pin short to avoid shorting to other components. Do not solder any wire to this lifted pin.
5. Connect pins 1 and 11 on U2. U2 is a 14-pin 74HC393 dual binary counter.
6. On U2, un-solder and lift pin 12 off the IC pad. Connect this lifted pin to pin 7 of the same chip.
7. Re-assemble the Portable Plus.

SOME DIAGNOSTICS MAY FAIL—IT'S OK!

That's all there is to it! If you run the disk-based diagnostics or the built-in diagnostics, be aware that the tests for the serial port, the modem and the multi-controller can fail. This is normal and is due to the more efficient performance of the NEC V30 microprocessor not exhibiting the expected behavior of a Harris 80C86. As long as all the other tests pass consistently, the machine will function properly.

WARNING AND CONCLUSION

At this time, an 8 MHz NEC V30 microprocessor can be purchased for about $15. Do not buy the cheaper 5 MHz version as it will not work. *Again, before you decide to modify the Portable Plus, be aware that doing so will not only void the HP warranty, but HP will not service the machine when it is sent in for repair. This applies even to units with expired warranty.*

The Portable Plus speedup modification is an excellent way to extract higher performance out of the machine. With a V30 running at 8 MHz, the machine becomes a better contender among its competitors, while still retaining several desirable features such as expandable RAM and ROM, long battery life, and non-volatile memory. Owners of the Portable Plus can also enjoy the fact that their machines can run faster than HP's new Portable Vectra CS PC, at least until we find out how to speed THAT machine up!

*[If you are a Portable Plus owner and would like to upgrade your machine, contact us. If there is a demand, we will look into doing the upgrade for users—probably in the $200 to $400 price range. -Hal]*

# Foundations

*By Hal Goldstein*
*[The Foundations column contains material that we feel every Portable user should know. We assume the reader is a novice computer user; however, readers novice through expert should find at least some of the material covered here useful. If you would like to write articles for this column or want us cover some topic in this space, please contact us.]*

## Getting More Out Of The ThinkJet

Most users really like the ThinkJet. It is lightweight, fast, quiet, and produces relatively good print quality. However, most users do not take full advantage of the type font (type style) and graphics capability of the ThinkJet. Primarily, this is because most software programs which run on the HP Portables do not directly tap the ThinkJet's potential. (Note that the graphics product SKETCH, reviewed in *The Portable Paper* Vol. 2, No. 4, and HPrint, reviewed in Vol. 2, No. 5, were written to exploit the ThinkJet's capabilities.)

In this article we will see how users of the most common applications (word processing and spreadsheets) can better use the ThinkJet. For example, we will see how to make the ThinkJet change type fonts within a document or spreadsheet and how to change the number of lines per inch.

To gain this knowledge we will be forced to dig deep into the way the Portables and the ThinkJet communicate. This means learning about **ASCII** codes and **escape sequences / Printer Control Language (PCL)**. For the uninitiated this material may seem formidable, but it's worth studying and understanding if you want to enhance your computer skills.

In this article, first, we show some of ThinkJet's capabilities by reviewing the ThinkJet self-test. Then we define and give examples of the ASCII encoding sequence, which translates to numbers the characters that the computer and printer can generate. At that point we can understand a lot about the Thinkjet's **Printer Control Language (PCL)**. We examine how PAM, Lotus, and your word-processor talk to the ThinkJet in PCL. We discuss a simpler, alternative Printer Control Language that ThinkJet understands. Finally, we list the words (commands) of the two Printer Control Languages.

### THE THINKJET SELF-TEST

For starters, turn off your printer, hold down the ThinkJet's line feed **lf** button, and turn on the printer. Now let go of the line feed button, and your ThinkJet will do a self-test. The resultant, one-page printout contains two sections: the ThinkJet character set and print pitches. The character set contains the normal upper and lower case alphabet, punctuation marks, numbers, foreign characters, and symbols for the first 32 ASCII characters. (ASCII is the name of the encoding sequence standard across most computers, which assigns numbers that the computer can understand to the character symbols that humans understand. We will discuss these ASCII codes in the next section.)

The four pitches in the self-test are compressed, normal, bold, and expanded.

### ASCII CODES

In the ASCII encoding sequence, every character which the computer and printer know about has a number associated with it. So, for example, the letter **a** is associated with 97, a **$** is 36, a blank space is 32. Any printer manual will have a table of ASCII codes showing the mapping between numbers and characters.

ASCII numbers less than 32 represent invisible characters which occupy no space in printed text, such as **carriage return**, 13; **backspace**; 8, and **escape**, 27. The ThinkJet printer has symbols for these first 32 ASCII characters (Ø through 3*1*), which consist of one alphabetic character on top of another. This is shown in the ThinkJet self-test printout.

### THE HP PRINTER CONTROL LANGUAGE (PCL)

It is usually possible to generate any of the characters found in the self-test (along with many variations) from your word-processor or spreadsheet. To do so, you must understand how the Portable tells the ThinkJet what to do.

Hewlett Packard developed a language its printers understand, called **printer control language** (PCL). This language is more compact than English. The only way a printer can "hear" commands in its own language is to receive characters such as letters and numbers from the computer. However, the printer must somehow know that it is about to receive a command from the language, rather than a character to print. Therefore, the first character of the command is always defined to be an invisible (non-printable) character. That character in the HP PCL usually turns out to be the character that stands for the **esc** (escape) key (ASCII 27).

Whenever a HP printer receives an escape character, it starts checking its internal table to see if an instruction is being sent. These PCL commands are often referred to as **escape sequences**.

For example, if the ThinkJet could understand English, you might tell it: "From now on, until I tell you differently, shrink the type and print in compressed mode." Since the ThinkJet only understands **printer control language** (PCL), you must speak the ThinkJet's language. The PCL equivalent to "print in compressed mode" is the following five character **escape sequence** (with no extra spaces): **esc &k2S**. The language is very precise, so the **k** must be lower case and the **S** must be upper case. Note: **esc** stands for the character (ASCII 27) generated by the **escape** key. No space separates the **esc** character and the **&**.

Your ThinkJet manual calls these PCL commands **escape sequences** and lists them in appendices A and J. For easy reference, we've also included a list of these PCL **escape sequences** at the end of this article.

### CONTROLLING THE THINKJET FROM MEMOMAKER AND THE EDITOR

Now how can we "speak" to the ThinkJet from within an

application? Suppose we are editing a MemoMaker file, and we want to print a paragraph in the middle of our document in compressed mode. How do we inform the ThinkJet? The answer is to insert in the MemoMaker document **esc &k2S** (PCL for "print in compressed mode") at the start of the paragraph and **esc &kØS** (PCL for "print using the normal ThinkJet typeface") at the end of the paragraph. When we send the document to the printer from MemoMaker, the ThinkJet will recognize the PCL commands and print the paragraph we have marked in compressed mode.

Portable Plus MemoMaker users may insert the **esc** character in their MemoMaker document by simply pressing the **esc** key. The "invisible" **escape** character is represented on the MemoMaker screen as **[** in inverse video. HP110 MemoMaker users are completely out of luck. It is impossible to place an **escape** character in a MemoMaker document—an oversight by the HP designer.

One solution for HP110 MemoMaker users (Plus users also can benefit) is to use text processing software such as HPrint (see *The Portable Paper* Vol. 2, No. 4, p. 12), or PrinterTalk (Vol. 1, No. 3, p. 19). For example, if you are using MemoMaker and plan to use PrinterTalk to print your document, you must insert **@y** at the start of the paragraph to compress and **@z** at the end of the paragraph. When it is time to print, you exit MemoMaker and enter the PrinterTalk program. You then print the MemoMaker file from within the PrinterTalk program. PrinterTalk automatically translates **@y** to **esc &k2S** (PCL for compress) and **@z** to **esc &kØS** (PCL for normal) and prints the document. (**@y** and **@z** are PrinterTalk predefined codes that PrinterTalk understands. In general, PrinterTalk and HPrint codes are much simpler than PCL.)

Users of Personalized Software's word processing program, The Editor, can insert PCL commands directly into their document. To generate the **esc** character, The Editor user must hold down the **CTRL** key and press **[**.

MemoMaker and The Editor users can generate foreign and other special characters by holding down the **Extend char** key and typing the appropriate letters. For example, you can generate the Spanish upside-down question mark within MemoMaker by holding down the **Extend char** key and pressing the zero key. You then send that character to the ThinkJet by printing the MemoMaker or The Editor file in the normal way.

## CONTROLLING THE THINKJET FROM PAM

If you have a HP110 or Portable Plus, you can use PAM's **f6 System Config** to control the ThinkJet. (Portable Vectra users can do the same with their machines by using the **mode** command, which we'll discuss in a future issue.) There are three fields relevant to this discussion: **Printer Pitch**, **Printer Line Spacing**, and **Printer Skip Perforation**.

If you move the cursor to **Printer Pitch** and keep pressing **f3 Next Choice**, you will cycle through the following five options: **normal**, **expanded**, **compressed**, **expanded-compressed**, and **no configuration**. If you set the field to **compressed**, then every time you return to PAM, PAM will send the printer **esc &k2S** (PCL for compressed mode).

If you leave it at **no configuration**, PAM will not send the ThinkJet a PCL command regarding printer pitch.

**Printer Line Spacing** gives three choices: **6 lines per inch**, **8 lines per inch**, and **no configuration**. Normally, the ThinkJet prints 6 lines per inch. However, if you were printing in compressed mode, you might want to pack more lines per page. You could set **Printer Line Spacing** to **8 lines per inch**. Now every time you return to PAM, PAM sends the ThinkJet the following PCL command for 8 lines per inch: **esc &l8D**.

Finally, if you have continuous paper, you might not want to print over the perforation (and simultaneously leave a small margin on either side). Or, you might prefer no break of the printing at all. To control the printer, either set **Printer Skip Perforation** to **On** or to **Off**. If you prefer the application or default (skip perforation off), define the field to be **no configuration**. If you select **On**, then every time you return to PAM, it will send your printer the PCL command **esc &l1L**.

## CONTROLLING THE THINKJET FROM LOTUS

It is not easy to exert much control over the ThinkJet printer from within a Lotus 1-2-3 (Release 1A) spreadsheet. There are some tricks, though.

First, if you want the file to be all one typeface, such as compressed, you can use the Lotus **P**rint **P**rinter **O**ptions **S**etup menu. At the Lotus prompt **Enter Setup String:** type **\Ø27&k2S** for compressed print. The **\Ø27** stands for the **esc** character (remember, **esc** is ASCII 27).

The rest of the PCL compressed mode command is the same as we've previously discussed.

If you want to print compressed at 8 lines per inch, you must add the 8-lines-per-inch PCL command to the setup string. The new setup string reads: **\Ø27&k2S\Ø27&l8D**. In compressed mode you can print up to 142 characters on a line. To take advantage of this, you must set your left margin, **P**rint **P**rinter **O**ptions **M**argins **L**eft, to 0, and your right margin, **P**rint **P**rinter **O**ptions **M**argins **R**ight, to 142.

(Two advanced notes: If you want to change your printer settings within your spreadsheet, you must break your print range into smaller ones—the setup string is printed only at the start of the range. Also, if you print to a file using the **/P**rint **F**ile command, Lotus ignores the Option Setup specification.)

There is another technique for sending PCL commands (also known as **escape sequences**) to the ThinkJet. In this technique you place ThinkJet escape sequences directly into cells within your spreadsheet. That way, when you print your spreadsheet, the ThinkJet will be sent the appropriate PCL command, such as "change to compressed mode," at the appropriate time.

The one difficulty with this technique is that Lotus 1A will not accept keyboard input for characters that have ASCII codes less than 32. However, most PCL commands start with **escape**, ASCII 27.

*The Portable Paper*, Vol. 1, No. 2, p. 3, describes this technique in detail. It requires creating an ASCII file with a **.prn** extension that contains the **escape** character. You can do this in DOS, using **copy con**, or in a word-processor like MemoMaker (Save as ASCII), The Editor, and Edlin. You can then import that file to Lotus using the **F**ile **I**mport **T**ext command. Similarly, you can import a file containing the foreign character set—Lotus 1A does not normally access these characters.

# More than 50 time-saving utilities for your HP Portable or HP150—all on a single disk

**Read this list.**
**It may look long and boring, but it can save you an incredible amount of daily effort.**

It's a list of the more than 50 programs on *Portable Utilities Disk, Volume 1: DOS Tools.* Each program performs a specific task to make life with your Portable more enjoyable and productive.

The programs are all in the public domain, which means that if you searched long enough you could find them for free on various electronic bulletin boards, in magazines, and in the archives of local user groups. But consider this: Even if you had the time to track this many programs down, what about evaluating them and making sense of the documentation? It would be a formidable task, but we have good news: You don't have to do it—we've already done it for you!

That's right—we've combed through hundreds of public domain utility programs that run on the Portables and HP150, and have selected only the best ones for inclusion in *Portable Utilities Disk, Volume 1: DOS Tools.* We've not only made sense of the documentation, but in many cases we've actually rewritten it. (**A printed, 65-page user manual containing program documentation and plenty of examples in included with the disk.** The manual is *conveniently indexed by subject*, so all you have to do is look up the name of the task you want done. You don't have to remember the names of the programs.)

And we've even changed some of the programs themselves so they work better and so their message displays are easier to understand. (Given the state of the art in writing and testing software, there's no guarantee that every item of software works as documented without a hitch. However, most of the testing and evaluating was done by Hal Goldstein, publisher of The Portable Paper, and by Gary Goodman and Thomas Page. Anyone who has read Gary's and Tom's articles in past issues of The Portable Paper already knows of their conscientiousness and thoroughness.)

So look through the list. If even *one* program proves useful, *DOS Tools* could pay for itself immediately. With more than 50 documented and tested programs to try out and use, it's the bargain of the century. Order yours today.

**Portable Utilities Disk, Volume 1:**
**DOS Tools . . . . $49.95**
**($39.95 for Portable Paper subscribers)**

## Contents of Portable Utilities Disk Vol. 1: DOS Tools

**ADDCOL.COM** Joins two files horizontally by appending corresponding lines.

**ARC512.ARC** Archived ARC file compression and library utility.

**ARCE.COM** Extracts ARChive files from ARC 5.12 and previous versions.

**ASK.COM** Adds interactive capability to batch files. Prompts user with message and waits for yes/no response.

**BEEP.COM** Makes a beep sound.

**CHANGE.COM** Changes or displays file attributes (read-only, archive, system, hidden).

**CLEAN.COM** Converts WordStar HP150 or Portable Plus MemoMaker document files to ASCII and removes control codes.

**COPYNEW.COM** Backs up files if no identical file on the destination disk. Also backs up whole directory structure creating matching subdirectories.

**CPU.COM** Displays computer's clock speed.

**CVTBIN.COM** Converts files from ASCII to binary when downloaded with CompuServe READ command.

**CYPHER.COM** Enciphers and deciphers a file to keep it confidential.

**DIRALL.COM** Displays attributes and pathnames for ALL files on a disk.

**DIRS.COM** Gives total disk space occupied by a set of files.

**DUMP.COM** Dumps and edits a disk or file in hexadecimal and ASCII.

**FDATE.COM** Changes the time-date stamp on a file.

**FDUMP.COM** Lists a file in hexadecimal and ASCII.

**FF.COM** Sends a form feed to the printer.

**FGREP.COM** Searches a group of files for a specified string.

**HC.COM** Converts binary files to/from hexadecimal ASCII files.

**HP IBM.COM** Does a "best fit" translation from HP ROMAN 8 character set to IBM PC Line Draw character set.

**IBM HP.COM** Does a "best fit" translation from IBM PC Line Draw character set to HP ROMAN 8 character set.

**INSTALLP.COM** Automates installing an application program on RAM disk—the HP Portable/Portable Plus Install Utility Program.

**LABEL.COM** Labels or changes the label name on a disk.

**LC.COM** Counts lines in each file; useful in determining amount of paper needed to print.

**LF.COM** Sends a line feed to the printer.

**LJET.COM** LaserJet pronter configuration program for the HP Portable. Makes selection LaserJet format easier.

**MMTOP.COM** Causes Portable Plus MemoMaker to print without usual 5-line top margin.

**MOVE.COM** Moves one file to another directory without copying.

**MOVEALL.COM** Moves a set of files to another directory without copying.

**OFF.COM** Shuts off the HP Portable from DOS.

**PACK.COM** Packs a disk. Does not have subdirectories bug of earlier version.

**PC.EXE** Allows some IBM programs to be run on HP150.

**PCBOSS.COM** File manager for IBM PC and compatibles only.

**PRINTIT.COM** Print formatting program, simple but effective.

**PRNCONF.COM** Allows ThinkJet printer to function as Epson printer; also sends escape sequences to the PRN device.

**RAMDSK.ARC** Archived utility for HP150 only; creates internal RAM disk.

**RENDIR.COM** Renames subdirectories.

**RNGNAME.COM** Displays and restores range names for Lotus worksheet.

**ROMAN8.WKS** Provides ability to enter any Roman8 character into Lotus worksheet.

**SDL.COM** Produces directory listings sorted by name, size, date, or extension.

**SEPARATE.COM** Breaks large text files into smaller files for MemoMaker.

**SM.COM** SpaceMaker. Converts. EXE files to .COM files and thus saves disk storage space and disk access time.

**SQPC.COM** Squeezes files to make them take up less space. Unsqueeze with TY.

**TEE.COM** Causes a program or file to be output to both the screen and a file or printer.

**TJETA.COM** Configures ThinkJet printer easily from the HP Portable.

**TOWS.COM** Converts ASCII document files to WordStar and Portable Plus MemoMaker format for editing and reformatting.

**TRANSLIT.COM** Converts one or more characters of one file to different character(s) and copies result to second file.

**TREEDIR.COM** Displays names of all files in each directory along with date, time and file size.

**TRIM.COM** Extracts selected columns from a file.

**TY.COM** Unsqueezes files squeezed by SQPC.

**VDL.COM** Allows user to selectively delete files from a group of files. Program lists files one by one and asks user whether to delete.

**WAIT.COM** Delays execution of a batch file until specified time.

**WD.COM** Saves and restores the working directory.

**WHEAROUT.COM** Gives percent of wear on disk in HP 9114 disk drive.

**WHEREIS.COM** Searches disk to find the specified file.

**APPENDIX A** Describes the contents of subdirectories/HP110,/SOURCE,/123DEMO found on the *DOS Tools* disk.

**UTILS.DOC** Reprints on disk *The Portable Paper* Vol 1, Issue 4, "Utilities" article. Gives practical examples of many of the files on the DOSTools disk.

Now available on **ROM Backup** for the Portable Plus for an additional $129 (See ROM Backup ad in this issue.)

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| Portable Plus | ● |
| Portable Vectra | ● |
| HP150 | ● |
| IBM PC and compat. | ● |
| Available on ROM Backup for the Portable Plus | |

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## A SIMPLER THINKJET LANGUAGE

The ThinkJet understands two, mutually exclusive printer control language commands. It normally understands, by default, the HP PCL commands. It also understands a much simpler language which emulates the Epson printer control language. Because the Epson language is simpler, and because many software packages know about Epson printers, many users prefer the "Alternate" or Epson mode.

Although the ThinkJet has the capacity to understand Epson codes, the HP-IL version of the ThinkJet has some difficulty in doing so. We distribute a public domain program called **prnconf.com** that puts the ThinkJet in the Alternate or Epson mode. This program is found on our The Editor disk and ROM, the DOS Tools disk, and will be available on our 1988 *The Portable Paper* subscriber's disk.

Portable Vectra users with the serial or parallel version of the ThinkJet have it easier. Find the little (dip) switches in back of the ThinkJet. If switch 5 is up, the ThinkJet will print in Epson mode. (If switches 6 through 8 are up, the ThinkJet will use the standard IBM line draw set instead of the HP Roman8 character set.)

## A TABLE OF PRINTER CODES

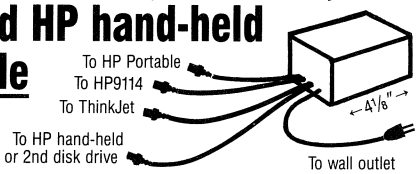
The following table lists the commands of both languages that the ThinkJet printer understands. In the table, **<esc>** stands for the **escape** character (ASCII 27). Within an application, you can usually enter any control character listed as **Ctrl** followed by a letter by holding down the CTRL key and pressing the letter.

In the table, if a character sequence begins with **<esc>**, capitalize or reduce the characters to lower case exactly as defined. Any character coupled with CTRL can be either upper or lower case.

In the table, "#" stands for a normal (decimal) number. "CHR$(#)" means take the ASCII equivalent to the number. You can find ASCII tables in any printer manual (appendix B in the ThinkJet manual). For example, to set page length to 40 in HP mode requires the following escape sequence (as listed in the table): **<ESC>&l40P**. On the other hand, the Alternate sequence for 40 lines per page is: **<esc>N(**. An ASCII table tells us that "(" is ASCII 40.

| ThinkJet Feature | HP Mode | Alternate Mode |
|---|---|---|
| Normal print | <esc>&k0S | |
| Expanded print | <esc>&k1S | Ctrl N |
| Expanded off | | Ctrl T |
| Compressed print | <esc>&k2S | Ctrl O |
| Compressed off | | Ctrl R |
| Expanded/compressed | <esc>&k3S | Ctrl N Ctrl O |
| Expanded/compr. off | | Ctrl T Ctrl R |
| Bold on | Ctrl N | <esc>E |
| Bold off | Ctrl O | <esc>F |
| 6 lines/inch | <esc>&l6D | <esc>2 |
| 8 lines/inch | <esc>&l8D | <esc>0 |
| Underline ON | <esc>&dD | <esc>-1 |
| Underline OFF | <esc>&d@ | <esc>-0 |
| Perforation skip OFF | <esc>&l0L | <esc>N CHR$(#) |
| Perforation skip ON | <esc>&l1L | <esc>O |
| Half line feed | <esc>= | |
| Form feed | Ctrl L | Ctrl L |
| Line feed | Ctrl J | Ctrl J |
| Backspace | Ctrl H | Ctrl H |
| Clear printer | <esc>E | <esc>@ |
| Page length in lines | <esc>&l#P | <esc>N CHR$(#) |
| Page length in inches | | <esc>C0 CHR$(#) |
| Text length in lines | <esc>&l#F | |


**Power your Portable, ThinkJet, HP9114, and HP hand-held from a single wall outlet.**




Can't plug your Portable, ThinkJet, HP9114, and HP hand-held into the same wall outlet because the recharger cubes are too big? Here's the solution:

The Model 110A Power Cube/Recharger from Summit Concepts.

The Model 110A has five power cords. Four are HP cords that plug into your HP Portable, ThinkJet, HP9114 disk drive(s), or HP hand-held (HP41, 71, 75, series 80, etc.). The fifth is a conventional AC cord that plugs into the wall and powers the other four.

Get rid of that tangle of extension cords, power strips, or whatever else you've been putting up with. Order a Model 110A Power Cube/Recharger today.

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*By Hal Goldstein*

*[Whereas most* Portable Paper *articles are relevant to all HP Portable users, this column will contain material concerning only the Portable Vectra. This column includes the latest developments on Portable Vectra products from HP, Personalized Software, and other third parties, as well as specific tips for the Portable Vectra. Please, send your contributions on disk or letter to Personalized Software, PO Box 869, Fairfield, IA 52556, or call (515) 472-6330.]*

## Introduction

*The Portable Paper* has become the focal point for sharing knowledge and experience among HP110 and Portable Plus users throughout the world. Your input as a Portable Vectra user will make the *The Portable Paper* equally valuable to Portable Vectra users.

In this column we will mainly cover Portable Vectra-specific issues such as screen readability, adapter slots, compatibility issues, and Portable Vectra bugs and workarounds. We will also examine software products which we feel are valuable for Portable Vectra users and are not covered elsewhere in *The Portable Paper*.

## HP Upgrades Portable Vectra Setup Program

HP Corvallis has informed us that they will be including a new, more powerful, **setup** program with future shipments of Portable Vectras. The main purpose of the **setup** program is to make the Vectra LCD screen more readable for those programs that assume a color monitor. At this time there is no formal program for upgrading **setup**. There will be some upgrade path, but details are unknown at this writing. We will keep you informed, and if HP lets us, perform the upgrade ourselves.

(The new **setup** program has all the features of the old **setup**, which were: Palette adjustment; Display redirection; Set Date and time; Set Alarm; Help.)

Here's what has been added for the new version:

**Remain Resident**

The user can choose one of 10 "hotkey" sequences which will allow access to the [Redirect Display] and [Adjust Palette] functions from within any application. Thus, you can dynamically "on the fly" change the color palette and/or the active display.

**Load Fonts**

The screen font can be changed to a non-U.S font. This is primarily for use in foreign countries.

**Initialize Hard Disk**

Re-initializes the hard disk to allow it to be formatted.

Also, there are two other utilities now included on the **setup** disk -**pal.com** and **turn off.com**.

**pal** is a memory-resident palette-changing utility for the HP Portable Vectra CS. It monitors requests to load and execute specific programs, and dynamically changes to a more suitable palette for those programs whose names it recognizes. The program names and desired palettes are specified by the user and maintained in a memory-resident list; **pal** provides the means of managing that list.

Once installed, **pal** watches for attempts to execute programs whose names have been added to the program/palette list. When it sees one, **pal** changes the palette to the ID specified for that program. When the program terminates, **pal** restores the palette to its previous state.

**turnoff** is a Portable Vectra CS utility that can be used to turnoff the computer either immediately or after a specified interval of inactivity of waiting at a DOS prompt.

## What's On The Portable Vectra Horizon?

By next issue we hope to be able to announce a number of products built specifically for The Portable Vectra. Here is an idea of what is coming.

CIGARETTE LIGHTER RECHARGER

You will soon be able to charge your Portable Vectra from your car's cigarette lighter. The prototype of this recharger has been built. It will probably retail for $49.95 and be available by the next issue of *The Portable Paper*.

HP ADAPTER CARDS

The distinguishing feature of the Portable Vectra (over other laptops) is its potential for expandability. The Portable Vectra contains four slots for adapter cards. HP fills up one slot with a card that contains a parallel printer port and a display port for a monochrome or color monitor. The Portable Vectra CS 20 uses a second slot for a controller card for the built-in hard disk.

HP sells several cards for use in the additional empty slots. They offer 1200- and 2400-baud modems as well as cards with serial ports and optional extended memory. These HP cards should all be available by the time you read this and can be purchased from Personalized Software or your HP dealer.

THIRD PARTY ADAPTER CARDS

Cards designed for the IBM PC or AT will not fit inside the Portable Vectra. They must be re-sized. Re-sizing involves changing the position of the pin connectors as well as shrinking the contents of the card by about 25%. Fortunately, it does not require modifying the electronic format of IBM- type cards.

Several third parties are designing adapter cards for the Portable Vectra family. If all goes according to plan, these cards should be available within two to six months.

HP-IL CARD

By our next issue an HP-IL card designed for the Portable Vectra's adapter slot should be available. The Portable Vectra HP-IL card will work like HP's HP-IL card that fits inside an IBM PC or compatible. Such a card will allow Portable Vectra users to connect and transfer files to an HP-IL ThinkJet, an HP9114 disk drive, or an HP110 or Portable Plus.

PORTABLE HARD DISK

TradeWind Peripherals will probably be creating a bus extender card for The Portable Vectra. Once the bus extender card is created, it will be possible to connect the Portable Vectra to one of TradeWind's portable hard disks. These disks contain from 10 up to 96 Megabytes of storage space.

The portable hard disk can be used for storage for either the dual floppy or hard disk version of the Portable Vectra. The portable hard disk can be used to back up the Portable Vectra's hard disk or high capacity microfloppy disks.

These rugged, reliable portable hard disks can be transferred easily from machine to machine. For $40 you can purchase a bus extender card for an IBM PC or AT or compatible. (The Portable Vectra extender card with power supply will be somewhat more expensive.) Let us say, for example, both your Portable Vectra and your IBM PC have bus extender cards installed. You could move the portable disk drive (and the files it contains) across the room or across the world and attach it to either computer.

We plan to use a TradeWind portable hard disk to create *The Portable Paper*. The portable hard disk will contain all the articles, the word processor, and desktop publishing software necessary to create *The Portable Paper*. Normally, that portable hard disk will be connected to our desktop (IBM PC compatible) Vectra. However, if I want to work on *The Portable Paper* at home with my Portable Vectra, I just take the portable hard disk home along with my Portable Vectra, and I have all the necessary files at my disposal.

5 1/4" FLOPPY DRIVE AND OTHER BUS EXTENDER CARD OPTIONS

The bus extender card (used to connect the portable hard disk to the Portable Vectra) opens up many worlds. A bus

extender card is sort of like an extension cord connecting the "innards" of the Portable Vectra to the outside world. What would normally go inside the Portable Vectra in one of the empty adapter slots could now attach externally to the bus extender card.

This means that network cards and controller cards (for tape backup systems, hard disks, and floppy disks) would not have to be redesigned to fit inside the Portable Vectra. Instead a controller card could be boxed with, say, a 5 1/4" disk drive. That way you could attach an external 5 1/4" disk drive or tape backup system to the Portable Vectra via the bus extender card. TradeWind peripherals and several other vendors are interested in producing a 5 1/4" floppy and tape backup system, via the bus extender card, for the Portable Vectra.

SCSI INTERFACE

Another third party is looking into creating a SCSI card for the Portable Vectra. The SCSI interface is standard with the latest Apple computers. A whole line of peripherals which connect to the SCSI interface (such as high-capacity hard disks and tape backup systems) are currently available.

THE SNAG

One problem is that most any external peripheral will require its own power supply. A power supply will necessarily decrease the portability of the whole system as bulk and weight increases. In general, designers of cards for the Portable Vectra must take into account the power specifications of the battery-powered Portable Vectra.

FAST DATA TRANSFER

There are a number of fast, serial port data transfer programs which allow you to transfer files from the Portable Vectra (3 1/2" floppy) to an IBM PC or compatible (5 1/4" floppy). Prices range from $59.95 to $129.95. We think Duette, (which we sell for $59.95), offers the best price/performance ratio (see the ad and "Additional Products" feature opposite the order form in this issue.) Other popular products include LapLink and The Brooklyn Bridge.

The problem with serial transfer is that the Portable Vectra comes standard with a parallel port. A serial port takes up an extra slot and costs an additional $300. There are fast transfer programs which use just the parallel port and that are now coming to market. We will be investigating them and reporting results.

WHAT PRODUCTS DO YOU WANT?

Since the inception of *The Portable Paper*, HP110 and Portable Plus users have found it to be a useful and responsive forum. Readers will write or call and describe a product they require (e.g., sideways printing for the ThinkJet, a good spelling checker). Other readers and Personalized Software, publishers of *The Portable Paper*, will then often locate such a product, or help to inspire its creation.

Therefore, if you need a certain kind of hardware or software product to use in conjunction with the Portable Vectra, tell us. Maybe we and our readership will be able to help you.

# DOS
## 110, PLUS, P. VECTRA

### DOS Tricks

*By Paul Grimmer*

SIMPLIFYING DIR

When you request directory listings of a given file extension, you do not have to type * for the name. For example, to find all of your files on your A drive that end in **wks**, enter **dir.wks**. This works on other drives. It will not work if you specify a path (e.g.,**dir \stuf\.wks** doesn't work).

SEEING TEXT AND DIRECTORIES ON SCREEN AT A TIME

Isn't it irritating when you list a file or directory, and it scrolls off the top of the screen faster than you can read it?

If the listing is not too long, HP110 and Portable Plus users can use cursor keys in DOS to go back up past the top of the screen to look at the data. Although you see 16 or 25 lines on the 110 and Plus, respectively, they actually have 48 and 64, and DOS does not "see" the cursor keys or the **Ext Char** function keys such as **-Line**. That is, if you press a cursor key, to DOS it is as if no key was ever pressed. (If you type **d**, then **i**, then the left cursor key three times, then **r** and the **Return** key you will get a directory listing even though your screen reads **rdi**.) An alternative solution is to write **/p** after the directory command (e.g.,**dir c: /p**) so that DOS lists the directory one page at a time.

Another technique is to use the "/w" option, which lists the directory names five across. I personally do not like this method since it is hard to read (the extensions and filenames are not next to each other) and no information other than the filename is given.

The option I like to use is the **CTRL s** toggle. When your directory listing is scrolling on the screen you can stop it by holding down the **CTRL** key and pressing **s**. When you key **CTRL s** again, the display continues. I don't like to have to press two keys simultaneously to do anything if I can avoid it, so I did not use this technique until recently when I remembered reading in the Technical Reference manual that the **Break Stop** on the lower right of the HP110/Plus keyboard generates this keystroke (actually it toggles between **CTRL s** and **CTRL q**) and now I can very easily stop and start listings of directories (and files) merely by pressing the **Stop** key.

SEEING THE CONTENTS OF A FILE

The contents of individual files can be listed by using the **more** pipe (built into the Plus, on the HP110 utility disk, and part of the Portable Vectra DOS disk). To look at a file named **myfile**, you simply enter **type myfile | more** (the **|** character is the shifted character just above the **Return** key). Now the first screenful will be listed. If you press the **space** bar, the next screenful is displayed. If you press **Return**, the next line is displayed. If you press **BackSpace**

on the HP110 or Portable Plus at any time, the display is backed up one page and if you press it again, the listing starts over from the top. This is a powerful yet under-used capability of the Portables.

The disadvantages of this technique are 1.) extra keystrokes are required to get it going (e.g.**type myfile | more**), and 2.) it creates a temporary file of the output on the disk and aborts if there is not enough room for this temporary file. Also, on the HP110, the program (**more.com**) must either be on a disk in a 9114 or it will waste space in the Edisc.

If you want some control over the listing without using **more.com** you can very simply use the **CTRL s** option discussed above. Strangely enough, I find that if you type two or more files consecutively, the **Stop** key does not work on anything but the first file (somehow it messes up the use of **CTRL c** to abort also).

# Lotus 123
## *110, PLUS, P. VECTRA*

### Getting To Point Mode From Edit Mode

In Lotus there is a way within the **Edit mode** to point (move the cursor) to a cell to enter a cell address. Simply pointing to the cell, rather than writing its address manually, is often easier, especially if the cell is off the screen. In the **Edit mode**, pressing the **Up** or **Down Arrow** key normally enters the formula you are editing and moves the cursor to the next cell. So how do you get into **Point mode** from **Edit mode**? To do so, you must be at the end of the formula you are editing. The last symbol in the formula must be an arithmetic operator (+,*,etc.), a comma, or an open parenthesis. Now move the cursor to the next cell by pressing the **Up** or **Down arrow** key. This puts you in **Point mode**. Now move to the cell whose address you wish to enter into the formula and press **Return**. You have added the cell address to your formula in **Edit mode**.

### Transfer-123

*By Craig Fullman*

How many times have you looked at a report on your terminal and wished you could obtain a subtotal or percent change for several line items? Now your wishing is a thing of the past. I have saved hours of data entry using Transfer-123 and Lotus 1-2-3 together.

Using Reflection1 in my Portable Plus, I copy on-line reports to a disk file. (Hint: Set TABS-SPACES to YES in the file transfer configuration for downloading, and use LOG BOTTOM in Reflection1 when receiving the report to make a disk file.) Then I run Transfer-123 and, in a few seconds, the text file is converted into a Lotus **.wks** file. I can File Combine several different reports in Lotus. It is easy to calculate any subtotals or ratios. The ability to do this quickly and easily is a tribute to the speed of the Plus and the effectiveness of Transfer-123.

I bought the package after someone showed it to me in the HP Software Solutions Catalog. The authors at Hawaiian Software Company had never tested the product on the Plus but were very supportive. They have recently introduced a new version that is at least ten times faster than the original! And Transfer-123 requires only 32K of Edisc space.

A report's format is stored in a separate definition file. This makes it easy to handle several different report formats by choosing the appropriate definition. The format of numbers ($ or fixed decimal) is preserved by Transfer-123. The definition file tells Transfer-123 what columns the labels and numbers will be in. One caution with Transfer-123: Any header and trailer lines of a report which do not follow the report column definition will be stripped off and saved in an exception file. For me, this is not a problem because I delete these rows in Lotus anyway.

I recommend Transfer-123 for anyone who uses both host computer on-line reports and Lotus. Transfer-123 is available for $129.95 from *Hawaiian Software Company, 4025 Avati Drive, San Diego, CA 92117, 619-270-6316.*

*[We checked out Transfer 123. The program works as described. However, the new version contains a program to automatically create the definition files. This new program will not work on the HP110 or Portable Plus, but will work fine on the Portable Vectra. In order to use the 32K version of Transfer 123 on the HP110, Portable Plus, or HP150, you must manually enter the column numbers in the definition files. You may order the product from us by phone (515) 472-6330, or by using the order form at the back of this issue. Our price is $115 and includes an additional 3 1/2" HP formatted disk. -Ed.]*

### Range Justify as Word Counter

You can count the number of words in your MemoMaker, The Editor or ASCII text document by using Lotus. (HP110 and Portable Plus Lotus 1A users are limited to 2,048 words—Lotus 2.01 users, 8192 words.)

First, of all rename (or copy to be absolutely safe) your document to a file name with a **.prn** extension. For example, **chap.1** would become **chapl.prn**. Now enter Lotus. Put your cursor on cell **A1** of a blank spreadsheet and execute the **/File, Import, Text** command. Your document should now be in the **A** column within Lotus.

In order for this trick to work best, there can be no blank lines (e.g., for paragraph breaks) in your document. Therefore, from within Lotus or your editor (before entering Lotus), delete any blank lines.

Your cursor should be in cell **A1** with the first line of text. Set the width of column A to 1 (**/Worksheet Column Set** ). With the cursor in **A1** select **/Range Justify** and **Return**. Each word is now allocated to a separate row, and the number of the last row containing text is also the number of words the document contains.

Sorting the list places similar words together, and allows you to scan for misspellings and redundancy. By keeping the original copy of the justified list, misspellings in the original text file can be located with Query Find. I have found this procedure useful, since MemoMaker does not have a search and replace command.

# Add Megabytes of RAM–and ROM–inside your Portable Plus!

## Leave that bulky disk drive in your closet! Now your 9-pound Portable Plus is all you'll ever need to run your programs and access your files!

With the advent of the Portable Plus, Hewlett-Packard solved almost every problem of computer portability. The machine is rugged, weighs only 9 pounds, stores software on ROM chips, and has non-volatile memory.

But as every user knows, the Plus has one major drawback: limited memory space. Until now, if you needed even a modest amount of space for data files and application programs, you were forced to carry an external disk drive wherever you went.

Now all that is changed. Because now you can boost your Portable Plus's memory by as much as 4 *megabytes*. How? Simply by installing special 1- or 2-megabyte RAM cards in the bottom of your Portable Plus.

### MEGABYTES PER CARD

The RAM cards have been developed by SoftWord, of Surrey, England. As SoftWord's exclusive U.S. distributor, Personalized Software is currently offering two kinds of cards:

- **2 Megabyte RAM Cards**
- **1 Megabyte RAM/ROM Cards** containing 1 megabyte of RAM and 8 sockets for ROM chips. Each ROM socket can hold up to 128K of data or software on ROM.

### "A" DRIVE AND "C" DRIVE

Each kind of SoftWord card comes in two different varieties: "A-drive" and "C-drive." The difference lies in how the RAM memory on the card is used in your system:

RAM that's on an *A-drive Card* becomes part of your Portable Plus's main—Edisk memory (the internal memory you partition using the P.A.M. System config menu). RAM that's on a *C-drive Card* doesn't affect your Plus's main/Edisk memory; instead it functions as electronic disk storage, just as though it were an external disk drive. (Usually it will be the C drive, but if you have an HP9114 plugged into your system, the memory card becomes the D drive.)

### EASY TO INSTALL AND USE

At the bottom of your Portable Plus, there are two compartments designed to hold HP's RAM and ROM expansion drawers. Any of the SoftWord cards can be installed in either of these two compartments. All you do is remove whatever drawer may be in there and replace with a SoftWord card.

Note: We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase. Please call for current trade-in prices.

Once installed, the extra RAM on the SoftWord cards works exactly like ordinary Portable Plus memory, only there's lots more of it.

### HOW TO CHOOSE

The examples in the box at the far right will help you examine your options. (For most users, the ideal configuration will either be the one in Example 2 or Example 4.)

Note: If you only purchase *one* SoftWord card, we recommend you get the C-drive variety rather than the A-drive variety. There are three reasons for this:

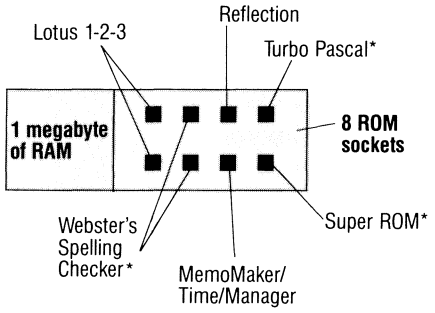
1. If you reset your Portable Plus using the Battery Reset button, you will lose whatever is in the A-drive memory, but what's in the C-drive memory will be retained.
2. A C-drive Card allows you to utilize whatever extra RAM drawer memory you may already be using for your A drive (see Example 1); by contrast, a 2 Megabyte RAM A-drive Card must be used *in place* of an existing RAM drawer.
3. With a C-drive Card in your system, you have, in effect, two built-in disk drives—the A drive, and the C drive that's on the card. By storing copies of critical data and programs on *both* drives, you protect yourself against disaster if your A drive becomes corrupted (which, as you may know, can happen).*

### WHOLE NEW MACHINE

The minute you install your new SoftWord card(s), your Portable Plus becomes an entirely new machine. You'll be able to run large applications like WordPerfect or RightWriter—or even an entire integrated package like T/Master—and still have plenty of room left over to manipulate large

**AN EXAMPLE OF HOW TO USE**
**a 1 Megabyte RAM/8-Socket ROM Card**

There are many ways to utilize the 8 ROM sockets on a 1 Megabyte RAM/ROM card. Here's one combination of programs you might find useful:




*Available from Personalized Software

*There is one potential drawback to using a C-drive Card: You cannot directly back up your C drive to an IBM PC or HP150 that has an HP-IL interface card if the PC or 150 has a hard disk of more than 10 megabytes. (In such cases, you can back up your C drive to an external disk drive or to your A drive, and then copy your files to the PC or 150 from there.)

data files, *all without the need for an external disk drive.*

In addition, you'll enjoy the faster access time that comes with RAM storage, and the convenience of not having to hassle with disks all the time. (You should, of course, continue to use disks to back up your files occasionally as a safety measure. So don't bury your disk drive *too* far back in your closet!)

## DOUBLE GUARANTEE

SoftWord's RAM cards are manufactured to extremely high standards by a company in the Netherlands that has more than seven years of experience in designing and fabricating memory expansion devices for Hewlett-Packard hand-helds and portables. Reliability is assured by extensive testing.

All SoftWord cards come with a one-year manufacturer's warranty covering parts and labor. Should a problem develop, simply send the card to us, and we will ship it to and from SoftWord at our expense.

In addition, the cards are covered by our own money-back guarantee: If you are not satisfied with a SoftWord card, you can return it within 60 days for a full refund.

By boosting your Plus's memory into the megabytes, you gain the ultimate flexibility in portable computing. Order one or more SoftWord cards, risk-free, today.

**2 Megabyte RAM A-drive Card or C-drive Card . . . . . $2995.**
**$2695 for Portable Paper subscribers.**

**1 Megabyte RAM/ROM A-drive Card or C-drive Card . . . . . $1995.**
**$1695 for Portable Paper subscribers.**

**IMPORTANT: Be sure to specify "A-drive Card" or "C-drive Card" on the order form.**

## TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
**Personalized Software**
P.O. Box 869, Fairfield, IA 52556 515/472-6330

## Non U.S. Customers:

Please order directly from SoftWord. Here is their full product line and price list (prices include shipping and insurance):

384 RAM Card . . . . . £575

½ Megabyte RAM A-drive Card or C-drive Card . £800
(Upgrade to 1 Megabyte) . . . . . £500

1 Megabyte RAM A-drive Card or C-drive Card . £1200

2 Megabyte RAM A-drive Card or C-drive Card . £1800

1 Megabyte RAM/ROM A-drive Card or C-drive Card . . . . . £1200

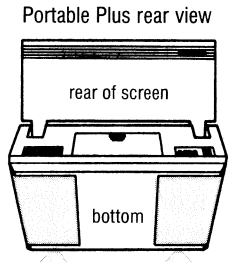
UK residents please add Value Added Tax at the applicable rate.

**SoftWord,** Astage, Rectory Lane, Windlesham, Surrey, GU20 6BW, England. Telephone: National: Bagshot (0276) 75440. International: +44276 75440

## Adding Megabytes With Memory Expansion Cards

Here are some ways you can use SoftWord's A-drive Cards and C-drive Cards to expand the capacity of your Portable Plus:

(Note: 1 megabyte =1024K)



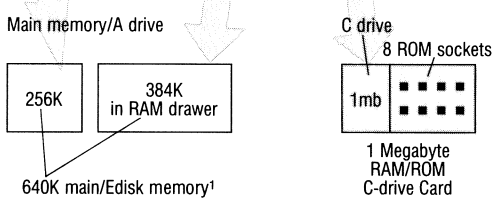

Portable Plus's built-in memory

Compartments at bottom of Portable Plus

EXAMPLE 1: **1.64 megabytes**

**1 Megabyte RAM/ROM C-drive Card** installed in a Portable Plus having 256K of built-in memory and 384K of extra memory purchased from HP.

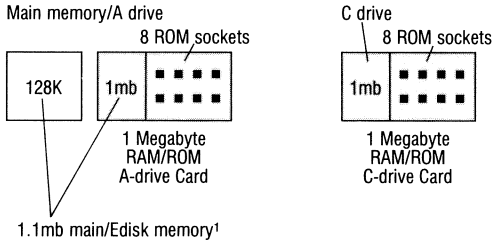
**Gives you:** 640K of main/Edisk memory, 8 ROM sockets, and an additional 1mb of C-drive storage.




EXAMPLE 2: **2.1 megabytes**

**1 Megabyte RAM/ROM A-drive Card** and **1 Megabyte RAM/ROM C-drive Card** installed in a Portable Plus having 128K of built-in memory. (Recommended for users who may need more than 8 sockets filled with software on ROM.)

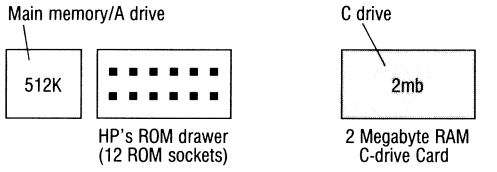
**Gives you:** 1.1mb of main/Edisk memory, 16 ROM sockets, and an additional 1mb of C-drive storage.




EXAMPLE 3: **2.5 megabytes**

**2 Megabyte RAM C-drive Card** installed in a Portable Plus having 512K of built-in memory and HP's ROM drawer.

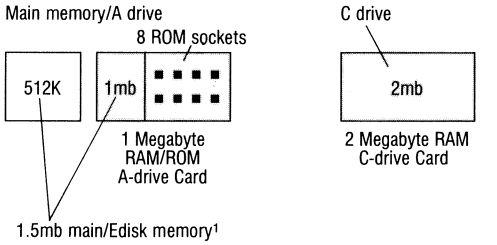
**Gives you:** 512K of main/Edisk memory, 12 ROM sockets, and 2mb of C-drive memory.




EXAMPLE 4: **3.5 megabytes**

**1 Megabyte RAM/ROM A-drive Card** and **2 Megabyte RAM C-drive Card** installed in a Portable Plus having 512K of built-in memory.

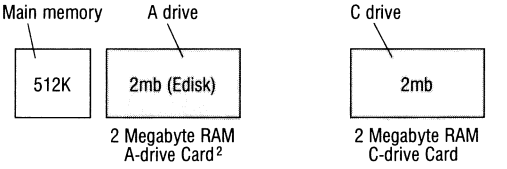
**Gives you:** 1.5mb of main/Edisk memory, 8 ROM sockets, and an additional 2mb of electronic disk storage.




EXAMPLE 5: **4.5 megabytes**

**2 Megabyte RAM A-drive Card**[3] and **2 Megabyte RAM C-drive Card** installed in a Portable Plus having 512K of built-in memory.

**Gives you:** 512K of main memory and an additional 4mb of storage. (No ROM sockets are available in this configuration.)




[1] Can be partitioned in any ratio in normal manner, with maximum main memory of 512K.

[2] A 2 megabyte RAM A-drive Card will only work in a Portable Plus having 512K of built-in memory. In the Portable Plus, 2.5mb of main/Edisk memory can only be partitioned as 512K main memory, 2mb Edisk.

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## Printing Lotus Spreadsheets And Graphs

*By Rolf R. Schmitt*

HP ThinkJet and LaserJet printers can be used in addition to plotters to create graphs using the PrintGraph portion of Lotus 1-2-3. The ThinkJet appears on the device-selection list in PrintGraph on the HP110 utilities disk (HP2225). Similarly, you can use the LaserJet, although the quality of diagonal lines, circles, and letters is rather jagged. Neither printer offers much of a speed advantage over the plotters.

## Using Lotus As A Calculator

It is possible to use Lotus 1-2-3 as a calculator without disturbing your current spreadsheet. Just follow these steps:

1. For safety's sake, move to an empty cell.
2. Press **f2**, the Edit key.
3. Do any legal Lotus mathematical operation without pressing the **Return** key.
4. Press **Calc (Shift f1)**. Note the answer, which appears in the edit line in upper left corner.
5. Press the **ESC** key.
6. The unchanged worksheet awaits your command.

# Spellbinder

## *110, PLUS, P. VECTRA*

## Spellbinder: A Versatile Word Processor For All HP Portables

*By David Hughes*

INTRODUCTION

Finding a word processor that will run equally well on the HP110, Portable PLUS, HP Portable Vectra, HP TouchScreen, and the IBM PC can be quite a challenge. The hardware of each computer is so radically different that it is very difficult to find a powerful word processing product that will run on all these computers, and nearly impossible to find a single product that will run on all of them without serious compromise.

The Editor from Personalized Software will run on all these machines. It is an excellent text editor for creating memos and straightforward documents. However, users with more demanding word-processing needs who use these different computers should take a look at Spellbinder.

SpellBinder is a small yet powerful full-featured word processor from Lexisoft, Inc. that runs on the Portables, HP Touchscreen, and the IBM PC. A single version is available for the HP110 and Portable Plus. Although I did not test it, a ROM version is available for the Portable PLUS from Blue Chip Computers (213) 553-3393, for an an extra $100 over the $495 retail purchase price.

## Not Much Disk Space

SpellBinder should be an attractive choice for HP110 owners, since it is more powerful than WordStar yet only two-thirds the size, and will run within the minimum Memory/Edisc configuration (96K/176K). The core system occupies approximately 88K of disk space. It is equally attractive to Portable Plus users, since it is takes a small amount of Edisc space and is available in ROM format.

## Modular Design

For a user who takes extended trips, travelling light while in the field is important to the successful operation of the HP110 . Portable owners can trim SpellBinder down to the core system, leaving the more powerful features (i.e., formatted printing, two column print) in the office, since most of the powerful formatting features are implemented in Spellbinder "macros" and included in separate files. It isn't necessary to carry the macros on the Edisc unless you actually need them. Macros are written in SpellBinder's "command language". They can be modified by the user and come standard with the system.

The macro features allow a user to configure Spellbinder for just about any kind of operation. It is a bit technical, and not for the fainthearted. An optional Technical Reference Manual is available from Lexisoft, Inc. for $60, to help you get "under the hood" to tune SpellBinder to suit your particular needs.

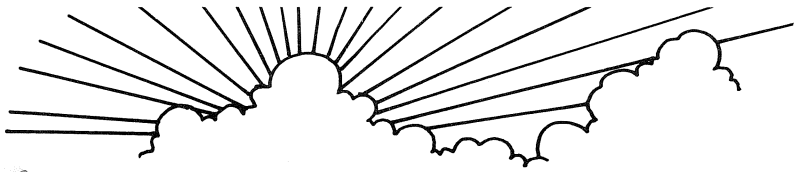
## A Wealth of Handy Features

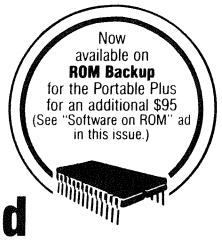
SpellBinder offers many specialized office management features. Standard macro files include: sorting, batch printing, mailmerge, boiler plate, forms, two column printing, columnar addition, four function calculator, and line numbering. A dictionary and grammar checker identify spelling, grammar and compositional errors. SpellBinder supports the HP LaserJet, including true proportional spacing, absolute tabs, user-defined printer tables, and multiple font capability. Unlike WordStar, SpellBinder supports footnotes, simple database features, key phrase recall, and independently-set left margins. If you are supporting an IBM PC or compatible in addition to your Portable, SpellBinder files can be used with Lexisoft's Desktop Publisher.

## Using SpellBinder

If you're technically inclined and would love to push your HP Portable to its limits as a word processor, or if you have many different kinds of computers, or would just like to travel light, then Spellbinder should suit your needs. I found it as difficult to learn as WordStar, but with somewhat more logical commands. If for some reason you should require assistance, Lexisoft's technical support is enthusiastic, and very responsive.

Screen scroll and formatted printing are a bit slow. Technically-minded Portable Plus users who have the technical reference manual can speed up screen refresh functions by creating a memory-mapped version for the Plus. DOS pathnames are fully supported in version 5.40. (I tested version 5.31, which did not support subdirectories.) Paginating and printing a document is a little tedious, because it isn't fully automatic. The program can be configured to take advantage of the HP's softkeys, which is highly recommended for the new user. Help can be modified for your particular application.






# The Editor It's way beyond MemoMaker!

## You won't believe all the word-processing features this $99.95* program contains—and it takes up less than 40K of memory!

***(only $79.95 for Portable Paper subscribers)**

*by Hal Goldstein*

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character, you have to use the left arrow key and the deletion key[s].) No compressed or expanded printing. No. . .—but why go on? If you use MemoMaker, you probably have your own list of things you wish it could do.

Well we have good news! Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP 150, IBM PC, and HP Vectra, which means that **now you can use the same program and files on your desktop that you use on your Portable.**

The program is called THE EDITOR. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITOR's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few minutes with THE EDITOR (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the many great features listed to the right, there are five more I especially want to emphasize:

**1.** THE EDITOR's Lotus-like menus make it incredibly easy to use.

**2.** THE EDITOR creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.

**3.** THE EDITOR will automatically back up your files to protect you against mistakes: When you save a file, THE EDITOR saves not just the current version, but the previous one as well.

**4.** THE EDITOR takes up less than 40K of memory.

**5.** THE EDITOR loads and saves files and executes commands exceptionally fast.

| RECOMMENDED FOR: | |
|---|---|
| HP110 Portable | ● |
| Portable Plus | ● |
| Portable Vectra | ● |
| HP150 | ● |
| IBM PC and compat. | ● |
| Available on ROM Backup for the Portable Plus | |

Even in the desktop market, **it is difficult to find a word processor with this many useful features at this low a price.** For the Portables, THE EDITOR simply can't be beat. See for yourself: Order your copy, risk-free, today.

**THE EDITOR . . . . . $99.95**
**$79.95 for Portable Paper subscribers.**

***60-DAY MONEY BACK GUARANTEE***
*See order form for details.*

## TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
**Personalized Software**
P.O. Box 869, Fairfield, IA 52556 515/472-6330

***Special combined offer—***
***SAVE $30:***
*THE EDITOR and THE FORMATTER together—*
*Only $99.95 total (Portable Paper subscribers only*

## The Formatter

THE FORMATTER gives you advanced formatting capabilities that even THE EDITOR can't handle—like: multi-line headers and footers•automatic hyphenation (you can even add your own words to the built-in dictionary)•user-specified page length and line length•automatic page numbering•tables and charts•table of contents generation•and more.

THE FORMATTER works by imbedding special formatting codes into your EDITOR, MemoMaker, or other ASCII text files. You can customize THE FORMATTER for almost any printer .

Note: The user manual itself is a challenge, and no technical support is available. We therefore recommend THE FORMATTER for strong computer users or those already familiar with text formatters.

If you need any of the features listed above, and if you're willing to spend the time it takes to learn the commands, THE FORMATTER is for you. Order your copy, risk-free, today.

**THE FORMATTER . . . . . $59.95**
**$49.95 for Portable Paper subscribers**

## THE EDITOR gives you all these great text-editing features and more:

- **Search and replace.**
  Just tell THE EDITOR what word or phrase to look for, and it will find every place you've used it. At your option, it will display each occurrence, or replace the occurrences either selectively or globally.
- **Edit two files at once.**
  THE EDITOR will display two separate portions of text at the same time, one above the other. You can view and edit two parts of the same file—or even two different files—simultaneously.
- **Backspace delete.**
  You can erase the last character with a single keystroke.
- **No limit on file size.**
  If you're an HP110 Portable user, you're no longer confined by MemoMaker's 819-Line limit. You can have as large a file as internal memory allows.
- **File merge.**
  You can merge two or more files together with ease.
- Compressed and **expanded.**
  You're no longer restricted to bold and underline. You can imbed control characters in your text to tell your printer to print all or part of your text compressed, expanded, bold, underlined, or whatever else your printer can handle.
- **Unlimited line length.**
  Your files are no longer limited to 80 characters per line. This means, for example, you can print 132-character lines on your ThinkJet printer in compressed mode.
- **Lines per page.**
  You can specify the number of lines per page, using the control codes required by your printer.
- **Easy in, easy out.**
  You can exit from THE EDITOR, run another program, then type a one-word command and be back in THE EDITOR in a flash, exactly where you left off. This includes exiting and returning from DOS—which means you can delete, copy, and rename files while running THE EDITOR.
- **Right justification and automatic paragraph indent.**
  A simple command right-justifies your text, and at the same time automatically indents your paragraphs however many spaces you wish.
- **Undelete.**
  Erased something you want back? No problem. A simple command will undelete the last line or block of text deleted.
- **Upper/lower case conversion.**
  Another simple command lets you change upper case to lower case and vice-versa without having to retype anything.

In terms of useful features per dollar, and in terms of the convenience and increased productivity you gain, I feel that THE EDITOR is a truly exceptional buy. I urge you to try it. Order yours today.

Hal Goldstein

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As a word processor, SpellBinder's performance was very good. Although not very efficient for power typists, the softkey menus serve as excellent guides to help you operate the program. If command key sequences are used in lieu of softkeys, program operation is simple, since your fingers stay centered on "home row". Its ability to import text from one document into another is as powerful as WordStar's, although not as flexible as that of some other programs currently available for the Portable Plus.

## Office Management Features

SpellBinder provides Portable users with several useful management tools, such as boilerplate text libraries, an electronic address book, forms handling, correspondence log, and mailmerge. Library entries are called out by number, saving you from retyping the entry or cutting it out of another document.

If SpellBinder doesn't provide all the features you're looking for, it is relatively easy to create them with the command language.

## Conclusions

SpellBinder is a versatile word processor that is very attractive to the user who operates in a "mixed" office environment consisting of several different computers. I liked the product for its adaptability and powerful macros. However, there is a price to pay for using a "generic" version on a variety of different computers. In lieu of using the BIOS or taking advantage of the special hardware features offered by a particular computer, the program must use the operating system, and make up for the operating system's inadequacies.

## Ordering Information

SpellBinder retails for $495. There is a full-blown implementation for the HP150 and another for the HP110. (Those implementations look very similar to a product HP used to market for its HP120/125 called Word125—a SpellBinder derivative.)

Portable Plus users may opt for either the HP110 version or the IBM version and run it in alternate mode. Portable Vectra users order the IBM PC version.

*The Portable Paper* subscribers may purchase the disk-based product from us for $365. LexiSoft, Spellbinder's publisher can be reached at (916) 758-3630. LexiSoft also produces a desktop publishing program that we will be testing on HP Portable computers.

SPECIAL FEATURE:

# A Comparison of the HP Portables

## RAM/ROM vs. Mechanical Disk Storage—The HP110/Portable Plus vs. the Portable Vectra

Hewlett Packard's two families of MS-DOS laptop computers represent the two approaches to computer portability in the marketplace today: the RAM/ROM disk-based portable and the mechanical disk-drive portable. In this article we will compare the two approaches by examining the Portable Plus/HP110 and the new HP Portable Vectra.

### RAM/ROM MACHINES

What do we mean by a RAM/ROM disk-based portable? The Hewlett-Packard Portable Plus and the HP110 contain two electronic "pseudo" disk drives: the RAM-based A drive and the ROM-based B drive. The A drive stores data and programs, the B drive stores programs that cannot be altered.

The Portables contain "non-volatile" RAM which is divided between internal memory and an electronic disk. Unlike volatile RAM, the electronic disk stores files and programs even after the computer is turned off. The internal battery supplies enough power to keep these files and programs alive for weeks and even months.

The user can adjust the size of both the internal memory and the electronic disk. For example, on the 512K Plus, a user can allot 128K to internal memory and 384K to the electronic disk drive. The B disk stores ROM software programs and is never used directly to save files.

### THE HP110

The first HP RAM/ROM portable, the HP110, emerged from one simple idea: to create a lightweight, powerful, rugged portable computer that meets 95 percent of a portable computer user's needs.

The HP110 provides a full implementation of Lotus 1A, a simple easy-to-use word-processor called MemoMaker, and communications software for the built-in, 300 baud modem—all on ROM. Its 272 Kbyte of Edisc and internal memory stores files, data, and programs. Lotus actually runs from the ROM or B disk. With a 96K/176K internal memory/RAM disk configuration, a HP110 can hold on its electronic disk: Turbo Pascal, a text formatter, 110K for data files—and still have enough internal memory to run many Lotus applications.

HP no longer makes this 16-line HP110. However, Personalized Software and other sources sell used HP110's for between $700 and $1000, the bargain of the year.

The HP110 does have its limitations. Some users want a bigger screen, larger memory, and IBM compatibility. They also want a choice of ROM applications and a higher-speed modem. To satisfy these desires, Hewlett-Packard created the Portable Plus.

### THE PORTABLE PLUS

The Portable Plus' 25-line screen and 300/1200 baud modem makes it more powerful than the HP110. It is more IBM compatible, although it is not a true compatible.

# 2400 baud portable modem for your HP Portable

The 4″×2″×1″ WorldPort 2400 costs less than HP's internal modems, is faster, and can be used with more than one computer.

## *Weighs only 6½ ounces!*

If you do data comunications with an HP Portable or Portable Plus, you've probably found the internal 300- or 1200-baud modem to be too slow. Until now, the only solution was to buy a bulky external modem and lug it around wherever you go.

A better solution is the Worldport 2400. It measures a trim 4″×2″×1″, it's rugged, it weighs only 6½ ounces including the battery, and it sends and receives at 300, 1200, and 2400 baud.

### A MYRIAD OF FEATURES

The Worldport 2400 has a wealth of features you would expect to find in a desktop modem several times its size.

**EXTRA BONUS FOR USERS OF THE IBM PC AND NEW HP PORTABLE VECTRA**

Included with the WorldPort 2400 at no charge is the acclaimed communications and remote control software package, Carbon Copy PLUS (retail value: $195). The program also comes free with the WorldPort1200—WorldPort2400 Upgrade Kit. (Carbon Copy PLUS will not run on the HP110 or Portable Plus, but both WorldPort modems will run with HP's communications software, namely the Terminal program for the HP110, and TERM and Reflection for the Portable Plus.)

For example, the WorldPort 2400 has auto-dial, auto-answer, and both pulse and tone operation. It comes with a standard modular phone plug for connecting with the telephone line. It offers nonvolatile storage of up to 20 commands. And it is fully compatible with the industry-standard Hayes AT Command Set, and with the HP110's Terminal software and the Portable Plus's TERM and Reflection software.

Since a modular plug is not always available, the WorldPort 2400 also has a built-in interface for an acoustic coupler. (The coupler, an optional extra, runs at 300 and 1200 baud.) The unit is compatible with both the internationally accepted CCITT communications standards and the Bell communications standards recognized in the U.S..

The WorldPort 2400 uses a standard 9-volt transistor radio battery (it's included with the unit). A fresh battery will keep the WorldPort humming for 8-10 hours. You can extend battery life by operating the unit from a wall outlet whenever possible, using the optional AC adapter. The WorldPort 2400 draws no power from your Portable's battery.

### DOUBLE GUARANTEE

In addition to our standard 60-day money-back guarantee, the WorldPort 2400 comes with a 2-year manufacturer's warranty covering defects in materials and workmanship.

The WorldPort 2400 offers portablility, reliability, well-designed features, and ease of use. Order yours, risk-free, today.

| | Retail Price | Subscriber Price |
|---|---|---|
| **WorldPort 2400 modem (with Carbon Copy PLUS software)** | $359.00 | $319.00 |
| **WorldPort 1200 modem (without software)** | 199.00 | 179.00 |
| **Cable to connect modem to HP Portables** | 30.00 | 20.00 |
| **Acoustic coupler (300/1200 baud)** | 59.95 | 56.95 |
| **9-volt AC adapter** | 6.95 | 6.95 |
| **Upgrade kit: WorldPort1200—WorldPort2400 (includes Carbon Copy PLUS software)** | 199.00 | 179.00 |

| RECOMMENDED FOR: | | | |
|---|---|---|---|
| HP110 Portable | • | Portable Vectra | • |
| Portable Plus | • | HP150 | • |
| IBM PC and compatibles | | | • |

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# Shelp

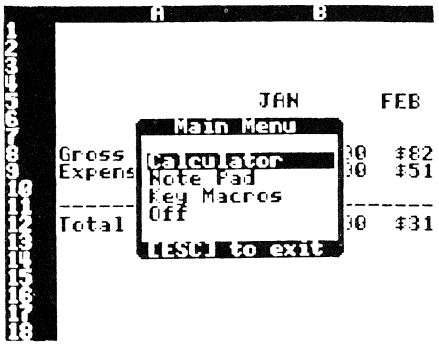
## Instant Access Pop-ups for the Portable Plus: Calculator • notepad • macros • and more

Now available on **ROM Backup** for the Portable Plus (See "Software on ROM" ad in this issue.)

*"A great, easy-to-use productivity booster. If there's one program every Portable Plus owner should have, it's Shelp."*—Hal Goldstein, Publisher, The Portable Paper

It's a program called **Shelp** *(shell + help)*, and it runs on the Portable Plus from within any non-graphics program. Here's all you do:

Press [Ctrl] [Shift] [Extend char] and up pops the Shelp menu, right in the middle of your application (Lotus in this example):




The menu gives you 4 choices: Calculator, Notepad, Key Macros, and Off.

Choose **Calculator** and get a 4-function calculator that works just like a pocket calculator with memory. You can:

- save results in ten different storage registers and retrieve them again with two quick keystrokes
- "paste" results at the cursor location in whatever application you were using when you invoked Shelp.

Choose **Notepad** and a "scratch pad" pops up on your screen. Type whatever you want into it, exit to your application, and then recall the notepad whenever you want.

No more having to scribble notes on paper to remind you of phone numbers, things to do, or bright ideas!

Choose **Key Macros** and you can assign "strips" of up to 31 typewriter characters to any of the 26 letters in the alphabet. This saves you having to type the same phrase over and over again.

*Example:* If you type "United States" a lot, you could assign the entire phrase to the "U" key. Just move the cursor to "U:" in the Keyboard Macros menu and type "United States."

To recall "United States," simply press [Ctrl] [Extend char], then [U]. Presto—"United States" appears at the cursor location in your application!

Choose **Off** and your Portable Plus turns off without having to return to P.A.M., and without having to save your application file. When you turn your computer back on, you'll be in the same place in the same application, with no data lost.

All the capabilities of IBM-PC programs like Borland's SideKick and SuperKey? Certainly not, but Shelp's the only such program for the Portable Plus. It's a clean, easy-to-use, and highly useful helper you'll want at your fingertips always.

Shelp runs on the Portable Plus only. It works with Time-Manager, MemoMaker, Reflection 1, Lotus, and any other non-graphics program. (Shelp does not run with MS Word.)

Shelp was written by Randy Salo, the former HP engineer who authored MemoMaker on the original HP Portable.

**Shelp . . . . . $55** *($49.95 for Portable Paper subscribers)*

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The nine-pound Portable Plus comes with a standard 512K of internal memory. Until recently, the memory could only be expanded by 384K of RAM, but now it can be expanded to 4.5 Megabytes (4500K). The standard Plus sells for $2195 (or $2700 with an internal 1200 baud modem).

Users may then purchase one or two additional drawers, depending on their own requirements. One drawer, usually reserved for ROM software, costs $150 plus the price of the ROM software (e.g., Lotus, $495). There are twelve sockets in the ROM drawer—room for six to 10 applications. The other drawer is usually reserved for additional RAM. This flexibility permits users to build their own system by purchasing ROM chips and disk-based software for the electronic RAM disk.

Recent developments have not just enhanced the Portable Plus, they have made it a brand new machine. A new $995 HP 1 megabyte RAM drawer, a Personalized Software/Softword 2 megabyte drawer, and a 1 megabyte RAM, 8-socket ROM drawer greatly expand the computer's memory and capability.

These larger RAM drawers allow full-blown RAM software packages such as WordPerfect (word processor), Condor 3 (relational data base manager), and T/Master (spreadsheet, word-processor, communications, graphics, database), to fit in the Plus' RAM.

## RAM/ROM ADVANTAGES

What are the advantages to RAM/ROM disk-based portables? First of all, they are rugged. Since there are no moving parts other than the keys, the portables can be dropped without damaging the unit.

Second, the electronic loading makes input and output fast. For example, it takes only a few seconds to load Lotus from ROM. Third, with built-in disks, users don't have to carry disks on the road or worry about copy protection (e.g., Lotus). Greater memory capacity means users can pack more in less space at lower cost.

Perhaps most importantly, the briefcase size and nine-pound weight make these computers truly portable.

ROM software comes in small chips that can be easily inserted into the Portable Plus. RAM software comes on 3 1/2" or 5 1/4" disks that can be run or transferred onto the electronic RAM disk from the HP9114 disk drive or an IBM PC.

## RAM/ROM DISADVANTAGES

One disadvantage to RAM/ROM portables is the separate disk drive required for loading, storing, and backing up files and for making room on the electronic disk. The external disk drive also provides slow access.

The Portable Plus is not a true IBM compatible and, even with recent, dramatic price reductions, is still fairly expensive. However, it certainly should be possible to create an IBM compatible RAM/ROM machine. As memory prices fall, it should be possible to create a less expensive machine.

## MECHANICAL DISK DRIVE BASED COMPUTERS

Unlike a RAM/ROM disk drive, a mechanical disk drive magnetically stores information on a flexible disk (or some other medium). While a motor spins the disk, a delicate, electronic device moves in very close to read the disk and write on it. These moving parts make the computer susceptible to damage if dropped. They also significantly increase the computer's weight.

## ENTER THE NEW PORTABLE VECTRA

The new Vectra CS computers (the Portable Vectra CS and the HP Portable Vectra CS Model 20) function as both portable and desktop computers. And they are truly IBM compatible!

The 17.6-pound, briefcase-size Vectra offers four internal I/O expansion slots for adding expanded memory, a 2400-baud modem, or peripherals such as printers and plotters—without increasing the computer's size.

Other features include: a large, 12-inch, liquid crystal display based on new "supertwist" technology; a full-size keypad with 12 function keys; a 1.44-Megabyte (1440K), 3 1/2", flexible disk drive capacity; and a standard 640 Kbytes of user memory.

Users can also add up to six Megabytes of EMS RAM to the Vectra and up to four Megabytes to the Vectra Model 20 using the I/O expansion slots. The CPU speed is twice as fast as the HP110, the Portable Plus, or the IBM XT 2. In certain applications it runs as fast or faster than an IBM AT.

The basic Vectra, with its dual-floppy system, costs $2495. The Vectra Model 20, with its 20 Megabyte system, is a few pounds heavier than the basic unit and costs $3595.

## MECHANICAL DISK DRIVE DISADVANTAGES

Despite a clamshell, closed-case design and extra shock mounting for its mechanical disk drive, the Vectra is not as sturdy as a RAM/ROM computer and its electronic disk drive.

It is less convenient than the HP110 and Portable Plus; it is twice as heavy, requires disks, and, although its central processor (CPU) is faster, its input and output is much slower.

## SUMMARY COMPARISON CHART OF TWO APPROACHES

The first section of the following chart takes the RAM/ROM vs. mechanical disk drive approach to portable computing given the state of today's technology and costs. The second section compares the Portable Plus to the Portable Vectra in particular. The differences in the second section reflect design decisions rather than characteristics inherent in RAM/ROM or mechanical disk drive machines.

| Characteristic | Electronic Disk Drives | Mechanical Disk Drives |
|---|---|---|
| Ruggedness | More | Less |
| I/O (Save/Retrieve) | Faster | Slower |
| Weight | Lighter | Heavier |
| Run off battery | Longer | Shorter |
| Backup | Harder | Easier |
| Storage capacity | Less | More |
| Cost | More | Less |
| Self-containment: | | |
| Short trips | More | Less |
| Long trips | Less | More |
| **Portable Plus Vs. Portable Vectra:** | | |
| Keyboard | Inferior | Superior |
| Screen | Smaller | Larger |
| IBM Compatibility | Some | Complete |
| Expandability | 2 RAM or ROM drawers | 4 Adapter slots |
| CPU | Slower | Faster |
| Internal memory | 512K Max | 4 Meg with EMS |

# WordPerfect customized for the Portable Plus and HP150

WordPerfect. It's the best-selling word processor for the IBM PC. According to many reviewers, it's the best word processor on the market.

WordPerfect is a word-processing powerhouse. Its advanced features include creation of text in columns, automatic footnote formatting and numbering, mail merging, and text sorting.

Now there are versions of WordPerfect for the HP Portable Plus and the HP150 touchscreen. In either case, it's the full-blown Version 4.2, complete with comprehensive thesaurus and 115,000-word spelling checker.

Not only can you use WordPerfect on your HP computer, but if you already have WordPerfect for your PC, you now can transfer files back and forth between your PC and your Portable Plus or HP150. The same WordPerfect features and commands work on all three machines. (The function key layout is different on the HP machines, but this is a simple matter for most PC users to adjust to.)

WordPerfect's powerful yet easy-to-use features have made it a best-seller. It's perfect for the Portable Plus or the HP150... and it just may be perfect for you. Order a copy today and use it at our risk. If, within 60 days, you are dissatisfied for any reason, simply return it for a full refund.

**WordPerfect . . . . . $495.**
**$299 for Portable Paper subscribers.**

**IMPORTANT: Be sure to specify whether you want the Portable Plus version or the HP150 version.**

**Note to Portable Plus users:** As always, you have to plan memory space in the Portable Plus. You'll need 512K of RAM to allow space for the basic WordPerfect program and still leave room for other files on your electronic disk. To fit *everything* on your A drive, you'll need an additional 340K for the spelling checker, and 360K for the thesaurus. (The speller and thesaurus can be run from your HP9114 if you wish.)

Our version of WordPerfect includes an 8-page supplement to the manual that tells you how to run WordPerfect on the Portable Plus.

**Note to HP150 users:** By special arrangement with WordPerfect Corporation, our version of WordPerfect includes the standard 5¼" disk plus our supplementary *double-sided* 3½" disk that customizes the program for HP150 users. The disk includes a special utility that allows WordPerfect to run on the 150. (If your HP150 requires *single-sided* disks and also has a hard disk drive, a version of WordPerfect may soon be available that will run on your machine. Please contact us for up-to-date information.)

| RECOMMENDED FOR: | |
|---|---|
| HP110 Portable | |
| Portable Plus | ● |
| Portable Vectra | ● |
| HP150 | ● |
| IBM PC and compat. | ● |

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CONCLUSION

The marketplace has not yet caught on to the true convenience and portability of RAM/ROM-based computers. Rather, most users still view the ideal portable as a scaled-down version of their desktop machines, mechanical disk drives and all. The more a portable resembles a desktop, the better the portable.

Given this criteria, the new HP Portable Vectra succeeds admirably. In fact, its ability to hold expansion cards, its full keyboard, and its 1.44 Megabyte floppy capacity give it in many ways the industry leadership.

However, for people who travel a lot and really need portability, RAM/ROM machines are the way to go. Mechanical disk drive-based portables can never match the light weight, ruggedness, and long battery life of RAM/ROM machines. Hopefully, HP will take the best of the two technologies to produce an IBM Compatible RAM/ROM computer with detachable mechanical disk drives.

My strong hope is that HP will not throw away its leadership role in the Portable industry by abandoning its ROM and RAM disk-based technology. Whether or not HP stays in this RAM/ROM arena, you can be sure that, eventually, other Portable manufacturers will pick up the idea and produce IBM PC-compatible RAM- and ROM-based machines. It is just too good of an approach to Portable computing not to catch on in the general marketplace.

# GRIMMER'S *Portable Tales*

## CompuServe: A Boon to HP Portable Users

*By Paul Grimmer*

THE VALUE OF AN ELECTRONIC FORUM FOR PORTABLE USERS

Do we need a bulletin board or some other forum especially for Portable owners? If so, what do we use?

These questions are very important to us as a user community. When the HP110/Portable Plus first came out, HP was a sort of clearinghouse for information. They made an effort to support the machines since this support helped sell more. Obviously this support has dropped off significantly as bugs were worked out and HP marched on to making and selling new gizmos. With a new machine such as the Portable Vectra, timely support is, perhaps, even more critical.

Now we have *The Portable Paper*. It is and will con-

tinue to be an excellent source for tips, software, etc.; but by its nature it must be incomplete. It is only published six times per year, and since it is a written publication, interaction between users is slow (a comment and a response can take up to two issues—four months), and there are not enough pages to hold the mass of ideas floating around. So it becomes clear that we must have a system where we can exchange ideas and problems and receive quick (if not instantaneous) response, and where we can present a united front to other hardware/software developers for products that will continue to enhance our machines. Since each HP110 has a modem and most of the Pluses and Portable Vectras have modems, some form of electronic forum seems to be the ideal.

Several options for a portable electronic forum exist: 1) a special part of an existing local bulletin board somewhere, 2) a new dedicated bulletin board, or 3) an existing information service such as CompuServe.

## ABOUT COMPUSERVE

After considering all of the options, I believe the HP forum in CompuServe is our best bet primarily for the following reasons: 1) it provides easy access for all users worldwide, 2) it is a proven and reliable system that is always available, 3) we have access to some of the best talent (inside and outside of HP) without any restrictions or propaganda, and 4) we have immediate access to other forums (e.g., MicroSoft, WordPerfect, IBM and others all have free forums).

CompuServe (or CIS for CompuServe Information Service) is by definition a non-biased and highly reliable system. My experiences in the last nine months with CIS and in the HP forum have been extremely rewarding. I'll gladly help anyone who is first trying to get on CompuServe or who needs help after they have used the system a little.

## THE HP FORUM ON COMPUSERVE

There are many free programs for the Portables in the data libraries of the HP forum and more are being added all the time. Although the forum is sponsored by HP, there is surprisingly little propaganda to wade through. I have not encountered a single case of unwarranted censorship of ideas on the forum even though there are occasional comments which are somewhat critical of HP. For those of us who have made a habit of complaining that HP does not care about us after we buy our equipment, we had better come up with new complaints because this forum shows that this is not true (no, I do not work for HP; I am just a user like you...).

The response to questions and problems on CIS is outstanding and this holds true for the HP forum as well. I have not seen a single problem or question posed that was not resolved within a day or so. Often the solution is presented within minutes. Questions range from simple (e.g., How do I leave a message?) to very complex (e.g., I have a Vectra with such-and-such board in it but I cannot seem to run program X). Answers to questions come from the sysops and the HP Response Center as well as other users. It is comforting to know that wherever I am and despite whatever problems I may confront, some of the world's experts are no more than a phone line away, and are willing to help.

## GETTING STARTED USING COMPUSERVE

But let's back up a step or two, and allow me to describe my experiences as I went from being a non-user to an enthusiastic subscriber to CompuServe.

Until about nine months ago, I had resisted the suggestions of my associates who urged me to subscribe to CompuServe. After all, I had used my HP110 and Plus to get on various local bulletin boards and hadn't really gotten anything out of them since essentially all they had were the same old DOS and IBM utilities that I already have. I knew CompuServe was an information service, but I did not want to get news or financial info, and I surely did not want to have to deal with a bunch of Apple and Commodore users.

I finally broke down and decided to try it out. It has been one of the most rewarding experiences I have ever had, and I have just barely scratched the surface of the system's capacities! In this article I will describe how it works. I believe it is our best chance (as HP110 and Portable Plus users) to avoid being abandoned as technology inevitably marches on.

For users of a new machine like the Portable Vectra, the forum is ideal. As the inevitable bugs and idiosyncracies of the new machine are discovered, users and HP engineers can share their experience and advice.

## PREREQUISITES FOR USING COMPUSERVE

All it takes is a modem. Every 110 has one built in and most Plus and Portable Vectra owners have one also, so you already have all of the hardware you need. (Plus and Portable Vectra owners can upgrade their machines to include a modem—or you can use an external modem.)

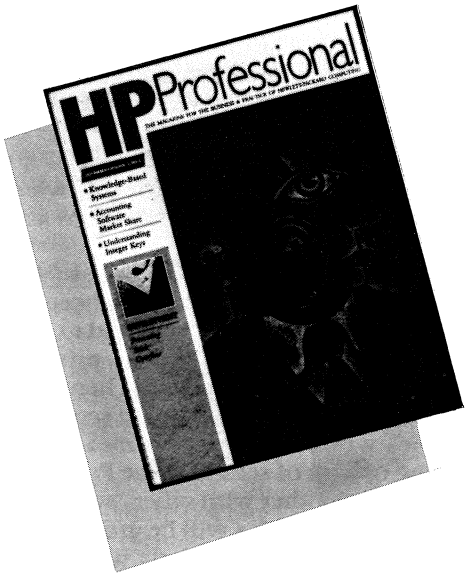
You also need some communication software, but all of the 110's and Pluses have this built in. The "Terminal" program is all you need for the 110, and "Term" works fine for the Plus although it is somewhat rudimentary. If you are a heavy user, I recommend PC2622/Reflection I or something equivalent because it can simplify things somewhat. However, Terminal and Term are all you need for most applications, including downloading files. There are many commercial and shareware packages available for the Portable Vectra including CrossTalk, Carbon Copy Plus, and ProComm.

CompuServe is a dial-in system just like your local bulletin boards. To minimize costs they have local numbers for use in many areas. One suggestion regarding accessing the system: if you do not have a local number to use, you may find it cheaper to use an out-of-state number than an in-state number since in most cases long distance interstate rates are less than intrastate rates. We will cover cost-reduction techniques later.

CompuServe has many different lines you can use to dial in with. I have used it in more than ten cities and have never had a problem getting on. All lines will take 300 baud, most will also accept 1200 and some will accept 2400 baud. To find out what numbers and baud rates you have available in your area, call the CompuServe hotline (also for problem reports): 800-848-8990. From Ohio or outside the U.S., the number is 614-457-8650.

Most bookstores have subscription kits for CompuServe on the shelf of the computer section and many software stores also carry them. The kit retails for $39.95. (Portable Paper *subscribers can purchase the kit from Personalized Software using the order form in back of the issue for $35.95 -Ed.*). The CompuServe subscription kits have lots of info on the system and also offer discount subscription rates and even give you up to $25 worth of

# FREE SUBSCRIPTION OFFER

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free system time. You also get a free subscription to CompuServe's monthly magazine, Online Today.

All it takes to get onto CompuServe is a user-id and a password, both of which are provided in the subscription kit. After you log on you will be given a permanent user-id, and you may choose your own password. When you log on to CompuServe, you are asked for a credit card number. You are charged at a rate of $12.50 an hour at 1200 Baud. Your credit card is automatically charged for your time on the system.

## STARTING WITH EMAIL AND THE FORUMS

There are many services on the system, and at first it can be fairly intimidating. There are two main areas that I recommend you start with: mail (referred to as E-mail or EasyPlex), and the forums. Through the mail system, you can send and receive electronic mail in the form of letters, notes, or even programs.

For example, I sent this article via EasyPlex to Hal Goldstein at *The Portable Paper*. The next time he logged onto CompuServe, the system sent Hal a message telling him that he had electronic mail waiting. At that time he could choose not to read his mail (this article), but if he did, he could save it on the system (I don't recommend this), reread it, or respond to it. (*What Hal did, since you are now reading this article, is download (capture) the article into a file on his Portable's Edisc. -Ed.*)

EasyPlex is a very simple system for beginners. It will give you a menu of choices at each step. (Once you become "advanced" you can bypass the menus if you want).

All of your mail is totally private. You can even send "registered mail" so that the system is required to notify you if/when your recipient has received it.

The other main part of the system is the forums. There are forums set up for a wide range of topics including computer hardware and software, science fiction, finance, current news, games, airline reservations, and even shopping (Bloomingdale's and Nieman-Marcus among others). You can limit your use to any of these. Most cost nothing to join, and you will interact with some of the best minds of the world in these forums. For example, my main interests are in HP stuff and Borland programming languages so I frequent their forums daily, but I never have to waste time reading about Apples or Bloomingdale's (disclaimer—the forum choices given here do not necessarily represent the views of every member of the Grimmer household!).

## WHAT COMPUSERVE HAS TO OFFER PORTABLE USERS

It is in the Hewlett Packard forum that our hopes for a HP Portable community lay. It costs nothing to join and all you pay for is your log-on time (which is about $12.50/hour). The forum has two system operators (or "sysops") who more or less referee. One is a HP employee (Bill Crow) and the other is independent (Mark Horvatich).

There are libraries of programs (that both HP and individuals have uploaded) to which you have complete access. For example, recently I wrote and uploaded a little utility for the Plus that makes the BackSpace key in Memomaker delete characters (rather than just move the cursor) when it backspaces. I also put a little utility in the library that is a patch for Time Manager (for the Portable) that makes the cursor a block rather than the virtually invisible underscore that it was made with. These and many programs are available for FREE.

In addition to programs, there is another major feature of the forum in the message system (which is totally different from EasyPlex). You can send messages to the sysops or to anyone else in the forum on virtually any topic (try to stay within the bounds of the forum, i.e., you probably won't get an overwhelming response to a question about why Tammy Faye wears so much make-up...). You can make these messages private but usually you make them public so that anyone else can help out if possible. I was pleasantly surprised to find that there is no editing of messages, even when they are not very complimentary of HP. From time to time, the HP employees do get in plugs for their goodies but it is not overdone, and I guess they can since they are paying the bills.

In nine months, I have not seen a question asked on any HP-related topic that was not answered in a prompt fashion, usually in a matter of minutes and always within a couple of days. The questions range from simple (how do I download such and such file?) to very complex (I have this configuration on my Vectra and after I added this new board my system crashed...). Many times the answers come from other users and not even from HP. I hope that I have contributed at least one-quarter of what I have learned because I have learned a tremendous amount.

## SOON TO COME: HP PORTABLE SUBFORUM

Up until now, 110/Plus users have been a bit disappointed with the forum since they have had to read all of the other messages regarding 150's, Vectras, printers/plotters etc. just to get to theirs. I have good news here. As of the first of the year (by the time you read this) a separate subtopic for the Portables will be set up. This means that Portable users have the option of selecting the Portable subtopic and of not having to bother with other "stuff". Also all of the software for the Portables will be grouped together so it will be much easier to find exactly what we want.

## HOW TO GET THE MOST OUT OF COMPUSERVE

Below are some recommendations I have for taking the greatest advantage of CompuServe while minimizing your costs. On this system, time truly is money.

1) When you log on, make your communications program capture ALL incoming data to a file on your home computer. You should not waste time on the system reading all of the messages that come across the screen. The system will stop and prompt you for all important items anyway.

2) When you join a forum such as HP's you have a menu that you use to set a group of parameters such as the name you wish to use in the forum, etc. One of the options will be whether or not you want the system to stop after displaying each message. If you capture all the messages to a file on your Portable, you do not need to read each one as it comes in. Therefore, tell the system that it should not stop after messages. This alone will cut your bill by over 60% (I had to learn the hard way...).

3) Never respond to EasyPlex mail or forum messages on-line. It is much easier to gather all of the things sent to you in a file as described above and edit out the stuff you do not want to keep. If you use the on-line editor within CompuServe, you pay a lot more than getting offline, writing your response, getting back on-line and then uploading. Your responses will be much clearer when you edit

# Whether you want to learn programming or you're a seasoned programmer, the best programming language for your HP Portable or Portable Plus is

# Turbo Pascal

## —and our Turbo Pascal Starter Kit is the best way to buy it!

## Here's why.

The Pascal programming language was originally designed for use at the college level in teaching the fundamentals of computer programming. Borland International enhanced the language, making it practical for actual programming use. Their version is called Turbo Pascal.

Today, Turbo Pascal is the programming language taught at most universities. The reason is that its underlying structure fosters good programming habits. It forces you to think in a modular way: You create self-contained, well-defined units and put them together to make a full working program.

### GREAT WORKING ENVIRONMENT

Turbo provides you with an exceptionally good programmer's environment.

One aspect of this is Turbo's built-in text editor. It's a sophisticated WordStar work-alike that in itself is worth the price of the program.

Another aspect is Turbo's compiler*. In addition to being uncommonly fast (an amazing 80-100 lines per second), it is also uncommonly helpful: If the compiler encounters a mistake in a program, it stops compiling, gives you an error message, returns you to the editor, and takes you to the place in your program where the error occured.

The *external* environment for Turbo is also excellent: There are numerous books, articles, public domain programs, and even a CompuServe forum devoted to helping people use Turbo to full advantage.

With all these advantages and more, it's no wonder that Turbo Pascal is today's best-selling programming language for the IBM PC.

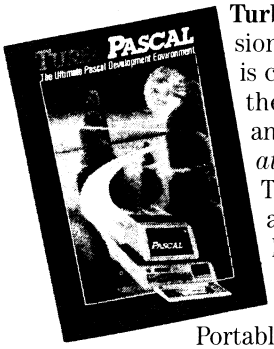
### THREE-PIECE STARTER KIT CUSTOMIZED FOR THE PORTABLES

For Portable and Portable Plus users, there's yet another enormous benefit: *Turbo Pascal takes up less than 40K of memory*—and that includes its powerful built-in text editor.

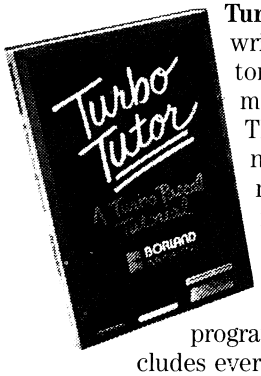
We are now offering Turbo Pascal in a special 3½″ disk version for your Portable or Portable Plus, ready to install from PAM.

Although you may purchase Turbo all by itself, we recommend our **Turbo Pascal Starter Kit.** It's ideal for novice and intermediate programmers alike.

The Starter Kit inludes **Turbo Pascal,** Borland's **Turbo Tutor,** and our own special disk, **Turbo Pascal Programs for the Portables.** Here's a rundown on each:

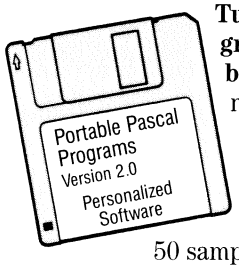



**Turbo Pascal:** Our version of Turbo Pascal is customized to both the HP110 Portable and the Portable Plus *at no extra charge.* The customization, authorized by Borland, allows the Turbo editor to use all the normal Portable editing keys (Extend Char—Delete Line, etc.). This saves you from having to learn many of the commands particular to WordStar.




**Turbo Tutor** is a well-written, interactive tutorial that includes a manual and a disk. The manual covers not just the fundamentals, but many fine points of Pascal programming as well; it is of value even to advanced programmers. The disk includes every example covered in the manual, already keyed in and ready to use. (Note: neither the IBM version nor the HP150 version of Turbo Tutor will run on the Portables; only our 3½″ disk version will.)

| RECOMMENDED FOR: | | | |
|---|---|---|---|
| HP110 Portable | • | Portable Vectra | |
| Portable Plus | • | HP150 | |
| IBM PC and compatibles | | | |




**Turbo Pascal Programs for the Portables** is a great supplement to Turbo Tutor. Based on the principle of *learning by example*, the disk contains more than 50 sample Turbo Pascal programs, and every one of them runs on the HP110 or the Portable Plus. The programs range in length from ten lines of code to hundreds, and from simple (temperature conversion, games, arithmetic) to advanced (input/output, graphics, and more). Every program is included on the disk so you don't have to key in any of them—they're ready to run or to be incorporated into your own larger Pascal programs.

If you're into—or getting into—the highly productive world of programming, our Turbo Pascal Starter Kit will help you become an expert. Order your copy of this dynamite programming package at no risk today.

**WHICH VERSION SHOULD YOU ORDER?**
Portable Vectra users: Order the latest version, Turbo Pascal 4.0.
HP110 and Portable Plus users: Version 4.0 will not work fully on your machine, but Version 3.0 will. We have Version 3.0 in limited quantity; when we run out, it will not be available again. Please order now.

Portable Paper Subscribers:
The Turbo Pascal Starter Kit saves you $30 off the price of the three products purchased separately.

| | *Retail price* | *Subscriber price* |
|---|---|---|
| **Turbo Pascal Starter Kit (3.0 or 4.0)** (includes Turbo Pascal, Turbo Tutor, Turbo Pascal Programs for the Portables) | **$189.85** | **159.95** |
| **Turbo Pascal (3.0 or 4.0)** | **99.95** | **89.95** |
| **Turbo Tutor 4.0** | **59.95** | **53.95** |
| **Turbo Tutor (3.0)** | **39.95** | **35.95** |
| **Pascal Programs for the Portables** | **49.95** | **44.95** |
| **Turbo Pascal on ROM Backup for the Portable Plus** (3.0)** | **95.00** | **95.00** |

**ROM Backup version includes RUN.COM, a utility program that can save 10K of disk space from any program you compile with Turbo. Note: *You must own (or order) the disk version of Turbo in order to purchase the ROM Backup version.* See ROM Backup ad in this issue for details.

TO ORDER: See inside back cover.
**Be sure to specify Version 3.0 or 4.0.**

**Compiling* a program means getting it to meet the rules of syntax imposed by the programming language. A program will not run until it can be compiled.

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off-line, since your text editor is much easier to use than the one on CompuServe, and you also do not have to rush through the response to minimize costs.

In most communication programs it is easy to send (upload) simple (ASCII) text to a host computer. For example, in PC2622 and Reflection for the Plus, when CompuServe prompts you to enter your text, you press the function key **f5** labelled **Command Line** and then enter **ptransmit myfile** where **myfile** is the name of the file you wish to send. It's really very easy.

4) In the forums, ask the sysop for the name of the file which contains the descriptions of the files in the data libraries. If you are using recommendation (1) above, you can merely go to the data library and "read" that file and the descriptions of each file will go into your file in your portable. This is much quicker than listing and reading the little description of each file in the library.

5) Do not be afraid to ask questions, even if it sounds dumb. We all have probably asked the same question and the forum members are really nice about not being condescending in their responses.

Also it is one of the major responsibilities of the sysops to help new users get going so you should not feel guilty about making them earn their keep. (I know the Sysops read *The Portable Paper* so I am sure one of them will probably have some cute remarks on the forum about some of the dumb things I have asked. Oh well...).

6) CompuServe accepts upper and lowercase characters. Please do not use all uppercase since this is usually reserved FOR SHOUTING.

7) If you use the Portable's Terminal program, you should set the following in the Terminal Config menu (**f5** on the main screen)- **Handshake : None, EOL Sequence : CR, Parity : None, Parity Check : Off, Data Bits : 7**, and **Echo : Off**.

For a detailed step-by-step explanation of using the HP110 terminal program with CompuServe see Vol 1, Issue 1, Page 4; Vol 1, Issue 4, Page 5; and Vol 2, issue 2, page 11.

8) If you use the Term program on the Plus, make sure that you set the values in the DataCom menu of PAM properly (7-bits and No Parity for CompuServe).

See Vol 2, Issue 6, Page 10 for a step-by-step description for transferring files using TERM on the Plus.

Note that Term is weak in that it does not have built-in file transfer capability such as that of XMODEM, but I have a program that allows you to do this from within Term. If you want it, get on CompuServe and send me a message or a letter, and I will send it to you.

9) If you use PC2622 or Reflection (I will refer to both as Reflection here), you are aware that the manual is very complex and confusing. The following tips should help: 1) Any PAM DataCom settings are ignored and Reflection uses whatever you have specified in the program's menus, (2) The Portable Plus performs a whole lot better if you use Reflection in DEC VT102 mode rather than HP mode. One of the things you have to tell CompuServe when you first get on the system is what type of machine you have and there is no choice for HP but there is for DEC VT102. This makes the backspace key work correctly, among other things.

See Vol 2, Issue 6, Page 12 for a step-by-step description of how to transfer files using Reflection on the Plus. To complete that discussion, here is how to send a file using XMODEM. When CompuServe prompts you to send the file, press **f5 Command Line** and enter **xs myfile** (**myfile** is the name of your file). This is shorthand for XSEND which tells Reflection to transmit the file using XMODEM. The **xr** command lets you receive a file.

10) Here is a technique that users of CompuServe can utilize to minimize connect charges. Once you get started and start paying CompuServe bills, you will appreciate this trick.

One of the most informative things to do is to read the messages that other users leave in a particular forum. This can get fairly expensive if you take the time to read them while on-line. By taking the steps listed below you can "log" the messages quickly into a file on your Portable Edisc (or Vectra floppy disk) and then use a word processor such as MemoMaker or The Editor to read/edit/print what you want to keep.

Log on to CompuServe. Go to your desired forum and from the main menu, enter **OP** to go to the menu that allows you to change your options. Enter **SM** to get the prompt to change the **Stop After Messages** setting. You can then enter **N** for **Never** so that when each message comes on the screen, the system will go right to the next one without stopping. After pressing **Return** at the **!** prompt you will be asked if you want to make the change permanent (i.e. affect all future sessions) or just this one session. After this, you will be returned to the main menu for your forum.

Now set up your Portable so that data which appears on the screen can be captured to a file (see above points).

Now you are ready to capture all incoming data to your file. If you want to catch all of the messages since the last time you were on, enter **RT;N** at the main menu prompt. The **RT** means **Read Threads**. This will list all messages and replies together so that it is easier to follow a discussion. The **N** refers to all that are **New** to you.

You can also use this technique to a) catch directory listings in the data libraries so you can decide which ones to download later, and b) read files in the data libraries that are not marked as **Binary** (those require a file transfer protocol such as **XModem**).

When you log off CompuServe and exit your terminal program, you can bring your file into your favorite text editor and toss out the stuff you don't want. Now you can learn at your own pace offline which is much cheaper than online.

11) The above should be enough to get you started on CompuServe. If you have any problems before you get on, call me at 907-345-3593 and we will work through your problems. After you get on, leave a message for me on the HP forum or via EasyPlex (my user-id is [71370,1303]) and I will respond within a day.

My new column will contain a fair amount of technical information, but I plan to put most of the details, including commented source code, on CompuServe so that we can make the best possible use of the precious space we have here. See you online!

*Paul Grimmer, president of Southern Software, writes commercial and public domain software for the HP110 and Portable Plus. His credits include* SideWinder *for sideways printing of spreadsheets to the ThinkJet printer;* Sketch *for free-form graphics on the Portables and ThinkJet,* Hprint *for fully exploiting the text, font,*

and graphics capabilities of the ThinkJet and QuietJet printers; and Link, *which enables the transfer of data between all HP-IL devices. "On the side" he works as an engineer at Conoco.*

*You can write Paul at 12501 Clippership Dr., Anchorage, AK 99515 or send Email on CompuServe to: 71370,1303.*

*by The Wizard, Cliff Looyenga*

## More On The Portable Vectra

MAPPING SCREEN COLOR

A friend of mine recently purchased a Portable Vectra with dual floppies and an external monitor. Since he's had it about a month I gave him a call to find out how he liked it.

The first thing we talked about was the screen and the color mapping. He uses the external monitor about 90% of the time and has only positive things to say about it. He feels the LCD screen is adequate for software that is able to run in black-and-white mode. However, programs that use color are very difficult to see, and red can't be seen at all! He has played with the supplied setup program to adjust the color mapping, but it's a trial-and-error process, especially since many color programs use many different colors. I got the impression he wasn't too successful in adjusting the grey scales for his software. Significantly, however, the LCD screen was his only complaint regarding the whole machine. *[See the Portable Vectra Views column about an enhanced* **setup** *utility HP will be offering for the LCD screen -Ed.]*

My friend did say that he didn't really miss the hard disk. With dual floppies that hold almost 1.5 megabytes each, he hasn't felt the need for more space.

TESTING THE VECTRA'S PERFORMANCE

I asked him about the performance of the machine and he said that he had done a couple of benchmarks. The first benchmark calculated a large group of prime numbers, and the second did some addition and subtraction of floats and long integers. Below are the result of the benchmarks (all times are in seconds):

| | Primes | Calculations |
|---|---|---|
| **Portable Plus:** | 105.3 | 267.7 |
| **Portable Vectra:** | 46.75 | 181.47 |
| **Original Vectra:** | 32.9 | 181.92 |

The only other comment my friend had was that the Portable Vectra is noticeably heavy, and that he'd highly recommend the softcase. The softcase is somewhat like an executive brief case, and allows room for more than just the Portable Vectra.

## Programming With Softkeys

One way of making software more friendly is by using softkeys (also known as function keys). Writing programs which use the softkey menu need to have three basic functions. One, to set up the label names, another to turn the menu on or off, and one to read the keys. **pcview**, a program I wrote, performs these functions very nicely, and they will even work for the Portable Vectra.

Below is a routine that will set up the softkey labels on Portables and the HP150:

```
type pcstr20 = string[20];
{********** This procedure will set up the soft-
keys for the Portables and the HP150 *}
procedure
setsoftkeys(comp:computertypes;fn1,fn2,fn3,fn4,
            fn5,fn6,fn7, fn8:pcstr20);
    var j,k :integer;
        line : pcstr20;
        fdef : array[1..8] of pcstr20 absolute fn8;
Begin
    k: = 8;
    if comp = hp110 then begin
      for j: = 1 to 8 do begin
        write(chr(27),'&f0a',j,'k5d-L f',j); { init soft-
            keys}
        write(chr(27),'&f0a',j,'k',length(fdef[k]),'d-
            1L',fdef[k]);
        k: = k-1;
    end;
end
else begin
    for j: = 1 to 8 do begin
        write(chr(27),'&f2a',j,'k5d2Lf',j,chr(27),
            chr(111 + j));
    write(chr(27),'&f2a',j,'k',length(fdef[k]),
            'd0L',fdef[k])
        k: = k-1;
      end;
    end;
end;
```

Note that the escape sequence for the 110 Portable is slightly different from that of the 150 and the Portable Plus. You'll notice in the above procedure that rather than write each softkey separately I use a loop. The unusual thing about this is that each softkey message comes in as a different variable name, thus making it normally not possible to loop. What I did is set up an array of strings the same size as each string passed and then referenced them in the array. Note that the strings are stored in reverse order.

Turning the softkey menu on or off can be done simply by writing the following escape sequences:

To turn on : **write(chr(27),'&jB')**

To turn off: **write(chr(27),'&j@')**

To read the function keys when they are pressed, you'll have to make sure that the transmit functions are turned on, and then each softkey will generate a special escape sequence. The escape sequence generated is **escape p** for **f1**, and the letter continues to increase one to **f8** which generates an **escape w**. To turn transmit functions on send the escape sequence: **esc &s1A**.

This should give you enough to start experimenting with softkeys from Turbo Pascal. If you'd rather not have to write your own, **pcview** can be purchased from Advanced Solutions for $26.95 (includes shipping), PO Box 567, Veradale, WA 99037, (509) 928-4147. That includes a 63-page manual, the **pcview** forms, and I/O system.

*Cliff Looyenga provides technical support for HP PC's and HP 3000's, and in those circles he is known as "The Wizard". He has developed a number of 110 Portable and Portable Plus utilities. Cliff's CompuServe ID is 75106,2130.*

# Through the Looking Glass

*By Ed Keefe*

A HAND-HELD LOOKING GLASS

This month's article veers away from the straight and narrow path of HP Portables and wanders into true "looking glass territory." True looking glass territory is a wonderland where you can create computer wish-lists and indulge in byte-sized fantasies. It's a land of not merely "true or false" but also of "would you believe: maybe."

In the last Looking Glass column I expressed the wish that this year's computer products would be the "start of something big." I should have wished for "the start of something small." That wish just might come true.

This particular trip into the looking glass began a couple of months ago. Last October, I received a small journal that announced a small computer, the Marys II, from Corvallis Microtechnology (CMT).

The cover of the journal showed a sketch of this small computer. It looked, surprisingly, like an HP-41CX with a multi-line display. However, the article describing the Marys-II made it sound like a much larger computer: 80C88 microprocessor, two built-in serial ports, six plug-in slots, standard 128K bytes RAM, expandable to 768K, ROM-based operating system, and an optional module to make the computer act like a super HP-41CX.

I mention this new computer because I know that many of us who own or use HP laptop computers use an HP-41CX or 71B hand held computer as well. For some computing tasks we believe that "smaller is better." We know, for sure, that smaller means "more portable, more personal."

On the other hand, we also know that smaller means slower. It also implies limited memory, and single line displays. And with HP hand helds it has also meant that we chain ourselves to the HP Interface Loop. The CMT hand held, apparently, has eliminated these limitations.

In November, I called CMT to learn more about the Marys-II and the people who designed it. I discovered that CMT is a company composed of former HP engineers who created the original HP-41 and 75/71 computers. Then I learned that CMT now calls the Marys-II the "MC-II." Its list price, starting Jan. 1, will be $750, with an introductory price of $495 for the next three months.

What follows is a brief summary of the features of the MC-II. Please realize that I have not yet seen this new computer. All of my information comes from David Lin, the president of CMT, and from what I have read. Later I'll tell you how to get on the company's mailing list so you can get your own information first hand.

HAND HELD HARDWARE: HOW SMALL IS SMALL?

The MC-II is as small as an HP-41C with a card reader. However, in the place of a card reader, the MC-II sports an 8 X 21 character LCD display. The display can also show graphics. There are nine rows of five keys, including two shift keys. (The keys use the same scan codes as the keys on many desktop PC's.) In place of HPIL jacks the computer uses two modular phone jacks to connect with the rest of the world.

Everything else for the MC-II comes in plug-in modules. The computer itself has room for six modules. There are modules for memory: 128K bytes each with battery back-up ($160 each). Even the Operating System (OS) for the MC-II comes in a plug-in module. And, of course, there is a module that contains an HP-41CX emulator.

HAND HELD SOFTWARE : NO 1-2-3, BUT LOTS OF C

The most important piece of software for any computer is the operating system. The MC-II has its own OS. It is not MS-DOS even though many of the commands look and feel like the MS-DOS commands COPY, DEL, REN, CHKDSK. However, the OS is new. CMT specifically wrote the OS to make the MC-II's batteries last as long as possible. It does this by putting the computer to sleep between keystrokes or when no program is running. This means that the computer's five penlight batteries should last a month before needing to be replaced or recharged. The OS also differs from MS-DOS in that it is not loaded into memory before it is run. It runs directly from its ROM module.

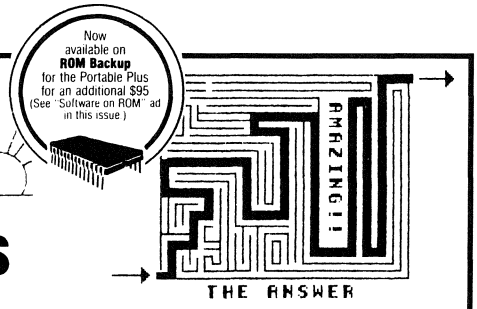
How about other software? Will the MC-II run 1-2-3? Not likely. Remember that the Operating System is not MS-DOS compatible. Any program that runs on a laptop would have to be completely rewritten to run on the MC-II.

SO WHAT WILL THE MC-II DO?

Well, right out of the box, the MC-II won't do much. However, with the 41M ROM module plugged in, the hand held computer turns into a super 41CX. The 41M module contains all 220 commands from the HP-41CX along with 40 additional functions. Most standard 41CX programs will run up to ten times faster on the MC-II. They will also be able to address up to 65,535 memory registers. So for software starters, there are over 6,000 programs written for the HP-41CX that should run on the MC-II.

There is even a way to transfer programs from a 41CX to the MC-II, but this requires a desktop computer. CMT will include the 41M module and all necessary software for the introductory price of the computer.

# At last! Graphics for the Portable and Portable Plus

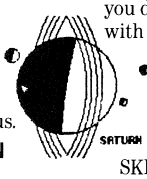



*by Hal Goldstein*
*President, Personalized Software*

Paul Grimmer has done it again.

He's the author of two of our best-selling programs: SideWinder (the sideways printng program for the HP Portables) and LINK (the program that lets you transfer data back and forth between HP hand-helds and Portables, printers, and other peripherals).

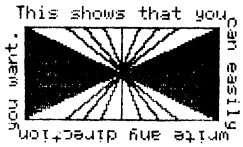
Now he's developed SKETCH, a fabulous graphics program designed for both the HP110 Portable and Portable Plus.




### CURSOR BECOMES DRAWING PEN

Using SKETCH couldn't be simpler:

Put SKETCH in *draw* mode, and your cursor becomes a "pen". The pen can either be "up" or "down." When it is "down," it draws wherever you move it. When it is up, you can move it around the screen without affecting the drawing. (You set the cursor up or down simply by pressing "U" or "D." You also can set the cursor speed, and can toggle between a faster speed and a slower speed in an instant.)




The pen also has an "eraser": Just press "E," and when the cursor is down it will erase whatever it encounters.

### DOZENS OF HANDY FEATURES

But that's just the beginning. SKETCH also lets you draw diagonals, boxes, circles, and arcs—each with a single key.

(If you have a mouse, you gain even more convenience: Move the mouse in any way you want, and the cursor follows instantly. See ad on the Logitech Mouse for the Portable Plus in this issue.)

SKETCH also lets you fill closed shapes with light or dark solid—or even invert the entire screen (light areas become dark and vice-versa)—with a single keystroke.

With SKETCH, you can create text in any of 5 different character sets and place the text anywhere in your drawing—including sideways or even upside-down.

SKETCH lets you save part or all of any drawing for future use, or you can print directly from the screen onto your ThinkJet or QuietJet pages.

| RECOMMENDED FOR: | |
|---|---|
| HP110 Portable | ● |
| Portable Plus | ● |
| Portable Vectra | |
| HP150 | |
| IBM PC and compat | |
| Available on ROM Backup for the Portable Plus | |

You can also import graphics screens into SKETCH from Lotus or any other graphics program.

SKETCH doesn't limit the size of your dreawing area to the size of your screen. The total drawing area is 70% bigger than the screen on the Portable Plus, and more than 150% bigger than the screen on the Portable. As you move the cursor past your screen's borders, SKETCH automatically shifts you into the areas that were off-screen.

Now you might be expecting that all these great features come at a high price in terms of memory space. But they don't. The entire program takes up only 44K! (As I said, Paul Grimmer of Southern Software has done it again.)

### USING IS BELIEVING

No matter how fired up you might get by reading about SKETCH or looking at the few samples we've shown of what it can do, there is no substitute for actually getting your hands on this wonderful program and trying it out for yourself.

Remember, with our money-back guarantee, if you are not completely satisfied with SKETCH within 60 days, you can return it for a full refund. Why not order a copy today?

**SKETCH graphics program . . . . . $80.**
**$75.95 for Portable Paper subscribers.**

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WHO WOULD LIKE AN MC-II?

Initially, I imagine that the MC-II will be more valuable to programmers than to users. Programmers may view the MC-II as another market for their skills. And, if you're thinking of writing a 1-2-3 clone for the MC-II, you'll want to hone your skills in MicroSoft C. The new hand held likes to be programmed in that computer language, almost exclusively. For faster program development, CMT urges you to use a desktop computer and transfer your work to the MC-II for testing and fine-tuning.

Those who do write programs for the MC-II will be able to put their programs on EPROM's for others to use. CMT will sell an EPROM burner for $295 and blank 128K byte EPROM's for $135.

Beyond programmers, the MC-II should appeal to those who are firmly convinced that "smaller is better and faster is best." There are over half a million users of HP hand held computers. Many of us would like to see our hand helds come up to speed: at least to the speed of our laptops.

SO, WHAT'S THE CATCH?

There is one thing missing in this new computer. The "D" is missing from the acronym "OS." The MC-II does not have a Disk Operating System. All loading and saving of files takes place through one of two serial RS-232c ports under the control of a built-in KERMIT program. The only way to load files is to download them from another computer in the same way that we download files from Compuserve. Again, CMT includes all the necessary cables, adapters and software to get the job done. Personalized Software has copies of the KERMIT program that will run on the HP-110 and Portable Plus. KERMIT will allow you to use the RS232 port on the HP-110 so that the internal 300-baud modem may be bypassed for faster file transfer.

*[Thanks to reader Gary Goodman, Personalized Software has versions of KERMIT for the HP110, Portable Plus, HP150, and Portable Vectra/IBM PC. To obtain the software and documentation for all four versions, send $15 to Personalized Software, P.O. Box 869, Fairfield, IA 52556 (515) 472-6330. If you do not indicate otherwise, we will send the HP110, Plus, and HP150 versions on a 3 1/2" disk and the IBM PC version on a 5 1/4" disk. -Hal]*

For the MC-II the only other catch is spelled with a capital "C". "C" stands for a programming language that is hard to master. "C" may also come to stand for "Catch-22": not enough people willing to learn "C" and not enough people who know "C" willing to sell their wares in a market of $10 programs. Without this willingness to learn and share, the MC-II will not become popular with students, farmers, foresters, and financiers.

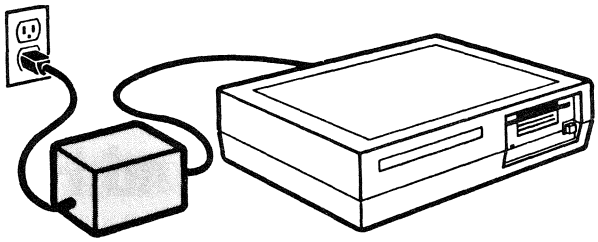
COULD THIS BE THE START OF SOMETHING SMALL?

Remember, this is true looking glass territory. To the question, "Will the MC-II survive and flourish?", we should answer "maybe." The MC-II has a lot going for it. It is the right size, at the right speed, at the right price and at just the right time. It also has some things going against it. It has a nonstandard operating system in an MS-DOS world and it likes "C". Hand held computer users may discount the drawbacks. After all, all hand held computers have their own operating systems and their own preferred language.

MAYBE...THE NEXT SMALL COMPUTER

The competition for the hand held computer market may already be underway. The October 26 issue of InfoWorld showed a picture of another one : the DataComputer 3.0.

# THE HP9114 EMPOWERER



If you've been frustrated trying to use your HP9114 external disk drive only to have the battery quit before you've finished your work, then you know the problem. Now you need the solution.

**THE PROBLEM:**
The charge on your HP9114 battery doesn't last long enough for you to do all you'd like to. For that matter, in some cases it doesn't last long enough to do *half* of what you'd like to.

According to Hewlett-Packard, you get up to 40 minutes of continuous usage before the battery dies. We've never gotten more than 20. Just formatting disks, transferring files, or running disk-intensive software and getting it to work can be a major triumph.

Plugging in the HP9114 doesn't help, either. That only recharges the battery—it doesn't let you keep working.

**WE HAVE THE SOLUTION:**
The official HP suggestion is to buy another battery pack and keep both plugged in. When one loses power, replace it with the other. This seems clumsy to us. What if you want to do several hours of disk intensive work? **At Personalized Software we have a better solution—the HP9114 Empowerer.**

The Empowerer is special power supply that will allow your HP9114 disk drive to run forever. Just remove the battery pack, and plug The Empowerer into the open slot and into your wall outlet. It's that easy!

| RECOMMENDED FOR: | |
|---|---|
| HP110 Portable | • |
| Portable Plus | • |
| Portable Vectra | |
| HP150 | |
| IBM PC and compat. | |

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*H*ow many times have you wished you had a second external disk drive? The Portable Equipment Exchange, a division of Personalized Software, is selling HP9114A units including power supply at a substantial discount. See enclosed four-page brochure for details.


Like the MC-II, this unit uses an 80C88 microprocessor. However, it has a slightly larger display. It uses MS-DOS 3.2 and, hence, is programmable in either BASIC, Pascal, or C. Most out-of-the-box software will not run on the DC 3.0 because of the small display. The machine will accommodate 32K byte EPROM's. However they must be installed at the factory. There are no plug-in slots.

Four AA batteries power the DC 3.0 for up to fifty hours. When these are exhausted, a built-in lithium battery preserves data during battery replacement. This small computer directly accesses standard printer and disk drives through a built-in parallel port. It also has a serial port, a telephone jack and a bar-code port. The DC 3.0 comes with 128K bytes of RAM but may be ordered with up to 960K bytes of RAM. The most distinguishing feature of the DC 3.0 is its full size numeric keypad. This keypad dominates the keyboard and dwarfs the small character keys. It is immediately obvious that the DataComputer 3.0 is meant as a tool for mobile data collectors such as inventory control teams, surveying crews and researchers. The unit weighs slightly more than two pounds and is can easily be held in the hand. Cost of a DC 3.0 with 128K memory is $1,645.

ENOUGH SAID...
In case this Looking Glass article has led you too far away from the HP fold please accept my apologies. I promise to return to the straight and narrow next time.

On the other hand, if you want to know more about the MC-II, you might like to know that CMT publishes their own journal to support the MC-II. The journal is called "Hand Held Solutions." To get on the company's mailing list and become a member of the CMT Users Club, just send them your name and address. Membership, and the journal, are free. CMT's address is:

*Hand Held Solutions, Corvallis Microtechnology, Inc., 895 NW Grant Ave., Corvallis, OR 97330, (503) 752-5456*

For further information about the DataComputer 3.0 you may write:

*National Datacomputer Inc., Middlesex Technology Center, 900 Middlesex Turnpike, Bldg. 5, Billerica, MA 01821*

*[Ed Keefe is an author, programmer, and computer science instructor. He is the president of the FastAid Company, 314 SW Logan, Ankeny, IA 50021. Ed's CompuServe ID is 73277,1064.]*

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*(110% continued from page 5)*

*it will be able to read, write, and format HP9114 3 1/2" diskettes in IBM 720KB format. (A utility able to run on the HP110 and Portable Plus, and designed to format 3 1/2" disks in IBM format on the HP9114 disk drive, will probably be included on the 1988 The Portable Paper* subscriber's disk.)

## Turbo Pascal 3.0 No Longer Offered By Borland

Turbo Pascal 3.0 will no longer be offered by Borland International. The HP150 version of Turbo Pascal 3.0 which works so nicely on both the HP110 and Portable Plus when modified with our (Personalized Software) supplemental disk will no longer be available after we sell our inventory. We purchased 75 Turbo Pascal 3.0's and 50 Turbo Tutors prior to the announcement. Unless we can work out an arrangement with Borland (they are not very eager), no

more Turbo Pascals or Turbo Tutors for the Portables will be available. It is still undetermined whether or how much of Turbo 4.0 will run on The Portable Plus.

## Comdex 1987

For the second year in a row my wife Rita and I attended the Comdex conference in Las Vegas. Comdex is THE microcomputer show of the year—almost 100,000 attendees visit nearly 2000 exhibits in 5 hotels and the Las Vegas Conference Center. It took us four full days to traverse all the exhibits.

I think of Comdex as a huge, living computer magazine. Comdex conferences on everything from the stock market crash to desktop publishing serve as the editorial content. Companies like HP and IBM have the equivalent of eight-page inserts as they take up a good chunk of real estate on the exhibit floor. Other companies have celebrities (one had wrestler King Kong Bundy) in their booths. (I asked Bundy if he wanted to arm wrestle. "$50 to the winner", he said. Not wanting to take his money, I passed.)

Heads of companies, and other people whose names appear constantly in the computer press could be seen walking down the Comdex aisles. Jim Manzi, CEO of Lotus, gave the keynote address. I met with WordPerfect marketing VP Dan Lunt about reducing the size of WordPerfect 4.2, 10K, so we could put it on ROM. (Dan was eager to co-operate, but after checking with WP engineers, he had to report that it does not seem possible. We have tentative permission to put 4.1 in ROM if there is enough interest.) I also talked with one of MicroPro's top executives about selling versions of WordStar for the HP Portable Plus and HP150.

I was not that successful in my search for new products for the HP110 and Portable Plus. Most of the appealing new software is built for IBM PC hardware, so it would not run on The Plus. We are receiving a review copy of dBXL and QuickSilver. dBXL is a dBase III clone that apparently works on the HP150 using the PC emulator and may work on the Plus. QuickSilver, a compiler for dBXL (to speed up execution of dBXL programs), should also work on the Plus. We'll report the results as soon as we know anything.


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*Normally: $39.95*

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On the Portable Vectra front I looked at IBM PC- compatible software that might appeal to portable users. However, I spent most of my time searching for vendors willing to customize or manufacture boards that would fill in the Portable Vectra adapter slots.

I learned about the SCSI interface (pronounced "scuzzy"). SCSI cards are built into the Apple MAC II and are available for IBM PS/2. Once a SCSI card is designed for the Portable Vectra, SCSI devices (hard disks, tape backups, modems, and so forth) can be daisy-chained to the SCSI card. That means a SCSI hard disk could be connected to a SCSI card installed into the Portable Vectra. A SCSI tape backup system could then be connected to the hard disk; and a SCSI 5 1/4" floppy drive could be connected to the tape backup system. An additional power supply might be required to make the peripherals work.

I spent quite a bit of time around the HP booth. There were always large crowds around the two Portable Vectras on exhibit, and people seemed pretty impressed. (Last year there were relatively few customers gathered around the Portable Plus at any one time.)

I had a chance to talk at length to Dan Terpak, head of the Portable division; Jim Martin, product manager for the HP Portables; and Paul Horstmeier, marketing manager for the Portable Plus. I got similar impressions from my discussions with all three: The Portable Vectra family represents the immediate future of HP portability. HP is

# HP110/HP110+ USER GROUPS

Thanks to so many of you who are willing to help organize local users groups. Users groups give an opportunity to share tips, answer questions, discuss other products, trade free software and Lotus templates, and meet other professionals. As you will notice some areas have more than one contact person and some major areas have none. If you are in a "missing" area and would like to organize a group, contact us. If your groups combine also tell us. We will publish this column each issue, keeping it up to date. Write *Local Users Groups, Box 869, Fairfield, IA, 515-472-6330.* **California**, *Southern California* We meet 2nd Thur 7-9 at HP sales office, 5161 Lankershim Blvd, North Hollywood. Request PORTOVEC Notes Newsletter, Dave Mark, 818-794-4969. *San Diego,* Stephen L. Eyre. 619-452-8530, Dan Butterfield, 619-470-3551. *San Mateo, Santa Clara Counties, San Francisco Bay Area*, BAYCHHU, HP Laptops & Handhelds, meet 2nd Sat of the month, Contact Jim Horn, 707-523-4890 eve., or Michael Felsenstein, 415-564-8279, eve. Herbert L. Hamerslough. D: 415-340-8811, E: 415-323-9618. *Los Altos/Mountain View,* Marge Sutton, D: 415-949-0509. E: 415-948-0627. **Colorado**, *Colorado Springs*, Dan Ritt, 303-528-8080. *Denver,* Call Bob Pressey, 303-777-0326 **Georgia**, *Atlanta,* Call Brian Walsh D:404-394-2500 E: 404-399-6842 **Hawaii**, *Honolulu,* Rodney Y. Fukuya if interested, 808-945-3111. **Indiana**, *Indianapolis,* Bob Glass, 317-638-2326. **Iowa**, *Mid Iowa*, Ed Keefe D: 515-964-6644 E: 515-964-7064. *Southeast Iowa*, Hal Goldstein, 515-472-6330 **Minnesota** *Minneapolis/St. Paul,* John Ferman (612) 822-1372 **Maine**, *Yarmouth,* Every last Tue 6:30, US Route one, Yarmouth, ME 04096, 846-5497 **North Carolina**, *Charlotte and surrounding area*, John Jacob, 704-334-3468. **Texas**, *Houston*, Thomas R. Page, D: 713-759-4259, E: 713-528-7138. **Utah**, *Utah County*, Donna Hoover, D: 378-4421, E: 375-4812. **Washington**, *Eastern Washington, Northern Idaho, Western Montana, and possibly Western Washington* , Bob Sandberg. 509-466-4999. *Eastern Washington*, Stephen S. Warner. D: 509-534-1588, E: 509-535-3322. *Western Washington*, Portable, Plus, 150, Vectra users meet first Thursday 7-9 p., HP sales office, Bellevue. Pete Ross, 206-342-8875. Portable, 40 & 50 series: 7-9 p. second Wed., UWash. computer center, Seattle. Bob Moore, 206-543-7879. **Washington D.C.**, *Greater Washington D.C. Area,* 8:00 PM, Third Monday of Each Month, Ballston Tower #1, 800 N. Quincy St., Room 519. Call to confirm and to say, Hi. William F. Cross. D:202-696-4112, E:703-845-9508. **Australia**, 8 Avoca St, S. Yarra, Victoria, Australia. Nigel S. Ball. 03-267-8344. **Central America**, I would be happy to form a users group, either Spanish or English, Apartado Postal 1587, Tegucigalpa, Honduras. **England**, Trafalgar House, Grenville Place, Mill Hill, London, NW7 3SA England. Tim Cullis. (01) 959 4359. **Netherlands,** Mr. R.M. Franquiner, Menthenbergseweg 13, NL-6816 PR, Arnhem, The Netherlands **Spain**, Club de usarios HP 110, Pont Reyes S.A., A la atencion de D. Enrique Serra, Ronda Universidad, 15, 08007, Espana. **Sweden**, Stockholm, first Thursday each month 6:30 p.m., call to confirm. Jens Pettersson 08-713-1710. Telex 149 70 gentel S.

committed to IBM compatibility and the design of the Portable Vectra's adapter slots. That means that third parties who develop hardware for those adapter slots will be able to sell those cards in future HP Portable Vectras.

They all see the Portable Plus as a truly portable alternative to the Portable Vectra, especially for sales professionals. They have equipped HP's sales force with Pluses and are expecting a number of major orders for Portable Pluses from companies automating their sales forces. The emphasis, however, will be on selling the Portable Vectras.

From what I gathered, there are no immediate plans for an IBM-compatible Portable Plus. The future evolution of both HP portable families depends on existing sales and market demands.

The other purpose of our trip to Las Vegas was to explore means of desktop publishing *The Portable Paper*. When we do start publishing *The Portable Paper* ourselves (without the direct involvement of a typesetter and graphic designer) we will keep you informed about what hardware and software we used to create our publication. Naturally, we will try to integrate HP Portables into the process.

Finally, at the HP booth, we bumped into Ron Herman, who heads Blue Chip Computer of Los Angeles. He told us that one of his customers is comedian and film actor Steve Martin, a big HP Portable Plus user. A number of you wrote in to tell us that a Portable Plus system appeared in Steve Martin's movie, Roxanne. Ron told us that in fact Steve Martin wrote the script for Roxanne on a Portable Plus.

## HP Hard Disks For The Original Portables

*By Bill Hassle*

Need more storage for your HP110 or Portable Plus? Do you have some spare change or disks? All Portables support CS80 and SS80 disks. SS80 disks are 9133H or newer; CS80 are 791x, 793x, and 794x. Yes, you can hook a 7937 to your portable. However, due to the way the directory is formatted, 16 megabytes is the maximum you can get.

Other "gotchas": 9133/9134/9135 disks prior to the 9133H (i.e., 9133A, 9133XV, etc.) are Amigo protocol and not CS80...but don't worry. They too can be accommodated, but with a little more work.

The Portables can only talk to hard disks formatted with DOS 2.11 or LESS! That means that moving a disk from your Touchscreen II with DOS rev 3.2 to the portables won't work if the Touchscreen formatted the disk—you won't be able to read the directory.

So you still need to talk to hard disks? Use the 82169A HPIL-to-HPIB converter. This black box requires power and is not portable (but neither are the hard disks). The converter must be serial – 2406Axxxxx or higher—unless it has already been upgraded. Plug in the converter, set the Portable **System Config f6** to external disk (or as many as you have), set the HPIB address on the disk to any value (0 to 7) that is different from any other disk or HPIB device on the circuit, and bingo—instant mass storage.

When you perform a **dir c:** on the new disk, it will tell you it is not a DOS disk (unless of course it is) so you must format it. Type **FORMAT C:** and away it goes ... but wait! Was there any useful data on that disk you just erased? Too bad. Always back up files before formatting a hard disk.

You can mix HPIL disks and the HPIB hard disk on the loop. You can also use the same HPIB converter to run plotters and/or printers. Printers must be the simple protocol—2631 or 293x models. 256x printers won't work unless they have a dumb mode.

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*(letters continued from page 4)*

the Middle East, Europe is still in the Middle Ages as far as telecommunication is concerned. This of course is due to the fact that the European telecommunications networks are run by government agencies (PTT's). So we will have to either a) spend huge amounts of money to rent modems from PTT's, or b) use a slow acoustic coupler or, c) write letters. Worldport modem, which supports the CCITT standard, can only be used with the acoustic coupler.

3. SKETCH:

A lot of fun! I already got back half the money I spent purchasing this product by creating laundry order forms for a small French hotel outside Geneva. The laundry service being actually an outside shop, they had no forms at all, so I created my own forms for my laundry, which of course went not undetected by the hotel staff. The hotel owner offered me a superb dinner as a "quid pro quo" for using my forms for other guests.

4. Selling HP Products:

Are you also selling LOTUS 1-2-3 upgrades for version 2.01 and MemoMaker A.2.00/TimeManagement A.03.CD (both in ROM)? If yes, at what price? I'd rather buy from you.

*[Thank you, but only HP can upgrade those products -Hal.]*

5. Staying Charged Abroad (Donald R. Harkleroad, *The Portable Paper* Vol. 2, No. 6): Unfortunately I can only help to solve the problem of recharging the battery: Donald should buy HP's Eurocharger part no. 82066B (at least that's the number printed on my chargers). It works with hardware sold in the United States. I bought my Portable Plus in New York and use it exclusively in Europe. You need one for each piece of hardware unless you can use Personalized Software's Model 110A Power Cube/Recharger, provided it is also working on 220-250 AC. The problem of different wall sockets can be solved with a universal adapter; I'm sure they are available throughout the United States. I'd be happy to supply one to Donald, if he contacts me next time he is in Switzerland (local phone 01-491 75 10 during business hours). As for the telecommunication problem see my remarks to Srini Nageshwar's article. With acoustic couplers, however, it should be no problem. If it's not working the first time, try it by switching from tone to pulse dialing (or vice-versa) when using TERM. (Type ATT for tone or ATP for pulse dialing.)

6. Report Generator for dBaseII:

Thank you for publishing my questions regarding an easy report writer. I still haven't found one, but I found one solution to my problem. I use the built-in report generator in combination with the "SET ALTERNATE" command. By setting alternate to a text file I have the possibility to edit this file with my word-processor. That's okay for simple lists but still not the ultimate solution.

That's all for this time. I'm still working on something printable referring to crossing borders with computers, which is a problem in Europe and the Middle East, mainly due to the United States' point-of-view towards exporting computers and know-how to not-so-friendly powers...

*Rudolf J. Sommer, Nussbaumen, Switzerland*

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| | HP9114 Empowerer (Power Supply) (p. 38) | | 99.95 | 89.95 | | |
| | HPrint | | 80.00 | 75.95 | | |
| | Link HP-IL Connecting Software | | 80.00 | 75.95 | | |
| | Logitech Mouse System for Portable Plus (mouse, software, cable) | | 219.00 | 179.95 | | |
| | 101 Macros For Lotus 1-2-3 | | 69.95 | 62.95 | | |
| | Milestone | | 99.95 | 89.95 | | |
| | Mobile Recharger | | 29.95 | 29.95 | | |
| | Norton Utilities Version 4.0 (p. 5) | | 99.95 | 89.95 | | |
| | Norton Utilities Advanced Edition (p. 5) | | 150.00 | 129.00 | | |
| | Power Cube/Recharger (p. 18) | | 89.95 | 84.95 | | |
| | PrinterTalk/Format110 | | 89.90 | 59.95 | | |
| | Project 8, 9, 10 | | 99.95 | 89.95 | | |
| | 1 Meg RAM/8 Socket ROM Card—1 yr guarantee (Plus only) (center spread) | | 1,995.00 | 1,695.00 | | |
| | 2 Meg RAM Card—1 yr guarantee (Plus only) (center spread) | | 2,995.00 | 2,695.00 | | |
| | RightWriter (p. 10) | | 95.00 | 89.00 | | |
| | Shelp (works on Portable Plus only) (p. 27) | | 55.00 | 49.95 | | |
| | SideWinder + Utilities (p. 13) | | 79.95 | 69.95 | | |
| | Sketch (p. 37) | | 80.00 | 75.95 | | |
| | Statistix | | 169.00 | 159.00 | | |
| | T/Maker (Recommended for HP110) (p. 7) | | 295.00 | 199.95 | | |
| | T/Master (Specify Plus, HP150, or Portable Vectra) (p. 7) | | 295.00 | 279.95 | | |
| | Turbo Pascal (Specify which computer) (p. 33) | | 99.95 | 89.95 | | |
| | Turbo Pascal Starter Kit (Pascal/Tutor/Pascal Programs) (110 or Plus only) (p. 33) | | 189.85 | 159.95 | | |
| | Typing Whiz (p. 14) | | 49.95 | 39.95 | | |
| | Webster's Spelling Checker (back cover) | | 79.95 | 69.95 | | |
| | WordPerfect (Specify Plus or HP150) (p. 29) | | 495.00 | 299.00 | | |
| | The Word Plus (Recommended for HP110) | | 150.00 | 99.00 | | |
| | WorldPort 2400 Portable Modem (p. 27) | | 389./359.00[5] | 339./319.00[5] | | |
| MISC. | | | | | | |
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| ROM BACKUP p.2 | ROM Backup—Product Description (For ordering instructions see page 43.) | Price | Qty | Total |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

**Important—Please read and initial:**
I already own (or am ordering) the disk-based versions of the programs included in my ROM Backup order. If not purchased from Personalized Software, I have enclosed proof of purchase.

Initials: _____

| | |
|---|---|
| Subtotal | |
| Iowa residents add 4% tax | |
| Shipping and handling (see box at right) | |
| TOTAL | |

## European Customers:

Instead of ordering through us, you may contact our European distributor:

SoftWord
Astage, Rectory Lane
Windlesham
Surrey, GU20 6BW
England
Phone:
**In England:** Bagshot (0276) 75440
**In Europe:** +44276 75440

## 60-DAY MONEY-BACK GUARANTEE

If, within 60 days, you are dissatisfied with a subscription or product for any reason, you may return it for a full refund. Should you become dissatisfied with a subscription after the 60-day period, we will refund the unused portion of your subscription.

[1] Includes *free* 1987 and 1988 Subscriber Disks.

[2] Includes *free* 1987 Subscriber Disk.

[3] Available only to subscribers.

[4] The $7.50 includes shipping. Alternatively, subscribers may mail in a formatted disk and a 39¢ self-addressed stamped envelope to receive the software at no charge.

[5] Lower price is without cable for connecting to HP Portables. Circle price that applies.

## FREE SHIPPING FOR U.S. ORDERS OVER $200

### FAST DELIVERY

In most cases, you will receive your shipment within 2-3 days of when we get your order.

### Non-U.S. Customers

Please make payment either by MasterCard or VISA, or by an International Money Order or check drawn off a U.S. bank.

**SHIPPING AND HANDLING:**

*Portable Paper subscriptions:*
Subscription prices include U.S. postage. Non-U.S. subscribers: please add the following amounts for each subscription year: Mexico and Canada: $3 surface mail, $6 air. Other countries: $6 surface, $18 air.

*All other products:*
In North America: Add $4 for one item, $7 for more than one item. FREE SHIPPING FOR U.S. ORDERS OVER $200. Outside North America: Add $3 surface mail, $10 airmail. We bill or charge non-U.S. orders for the actual postage if it exceeds these amounts.

★=NEW

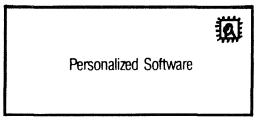
# How to Order

## TO ORDER BY PHONE:

Call (515)472-6330 between
9:00 am and 4:30 pm Central Time,
Monday through Friday, or use CompuServe
EMAIL—ID 72257, 714.

## TO ORDER BY MAIL:

1. Fill out your name, etc. on the reverse side of the order form.
   - Be sure to indicate your disk requirements.
2. Locate desired items on order form.
   - Subscriptions are at the top.
   - Products are next and are alphabetized.
   - The blank lines near the bottom labelled MISC are for you to write in special instructions or to order miscellaneous products not listed on the form.
   - The last section of the order form is for ordering software on ROM backup. See below.




3. Fill in desired quantity of each item.
   - Please pay special attention to footnotes.
4. Calculate shipping and handling costs (see box near bottom of order form).
   - Shipping is FREE for U.S. orders over $200.
5. Calculate total.
6. If paying by check or money order:
   - Make payable in U.S. funds to PERSONALIZED SOFTWARE.
   - Place check and order form in an envelope and mail.
   - If you'd rather have us pay the postage:
     - Fold order form so panel addressed to Personalized Software is on the outside.
     - Tape shut and drop in mail.

## ADDITIONAL PRODUCTS

To order any of the following products (or others described in The Portable Paper but not listed on the opposite page), simply write the product name and price on one of the blank lines in the MISC section near the bottom of the order form.

| *Product* | *Retail Price* | *Subscriber Price* |
|---|---|---|
| CompuServe Starter Kit (p. 39) | $39.95 | $35.95 |
| Duette (Portable Vectra only) (p. 9) | 59.95 | 56.95 |
| HP9114 Empower with Battery Pack | 225.00 | 199.00 |
| Format110 | 39.95 | 35.95 |
| Mouse: Logitech | 119.00 | 99.95 |
| Mouse: Microsoft | 195.00 | 174.95 |
| Mouse Software | 70.00 | 60.00 |
| Mouse Cable | 30.00 | 20.00 |
| Padded Case for Printer/Disk Drive | 39.95 | 37.95 |
| Padded Case for HP Portable/Plus | 59.95 | 56.95 |
| Pertmaster* | 695.00 | 499.00 |
| Pertmaster Demo* | 50.00 | 50.00 |
| PrinterTalk | 49.95 | 44.95 |
| Private File | 33.95 | 34.95 |
| RightWords dictionary extension for RightWriter (p. 10) | $29.95 | $29.95 |
| SideWinder (without utilities) (p. 13) | 69.95 | 59.95 |
| Tiger Fox | 32.95 | 29.95 |
| Turbo Pascal Programs for Portables (p. 33) | 49.95 | 44.95 |
| Turbo Toolbox (p. 33) | 69.95 | 62.95 |
| Turbo Tutor 3.0 (p. 33) | 39.95 | 35.95 |
| Turbo Tutor 4.0 (p. 33) | 59.95 | 53.95 |
| WorldPort 1200 modem (p. 27) | 199.00 | 179.00 |
| Acoustic coupler (300/1200 baud) | 59.95 | 56.95 |
| 9-volt AC adapter for modem | 6.95 | 6.95 |
| Cable to connect Portable to Modem | 30.00 | 20.00 |
| WorldPort 1200 to WorldPort 2400 Upgrade Kit (p. 27) | 199.00 | 179.00 |

*Specify whether HP110, Portable Plus, HP150, or IBM PC. Price of Pertmaster Demo applicable to cost of Pertmaster.

## SOFTWARE AVAILABLE ON ROM BACKUP

To order any of the following products on ROM Backup, simply write the product name and price on one of the blank lines in the ROM Backup section at the bottom of the order form.

| | *Size of ROM* | *Price* |
|---|---|---|
| Best of DOS Tools (p. 17) (Two 64K ROMs) | 128K | $129. |
| The Editor (p. 25) | 64K | 95. |
| HPCalculator | 64K | 95. |
| HPDuette (p. 9) | 64K | 95. |
| HPrint | 64K | 95. |
| Shelp (p. 27) | 32K | 55. |
| Shelp + SideWinder[a] | 64K | 95. |
| SideWinder[a] (p. 13) | 32K | 55. |
| Sketch (p. 37) | 64K | $95 |
| Super ROM (center spread) (The Editor, Mini PrinterTalk,[b] Format110, Shelp, and SideWinder,[a]) | 128K | $149. |
| Turbo Pascal (p. 33) | 64K | 95. |
| Typing Whiz (p. 14) | 64K | 95. |
| Webster's Spelling Checker (Back cover) (Two 128K ROMs) | 256K | 179. |

## IMPORTANT:

**You must own (or order) the disk versions of any products you buy on ROM Backup. See inside front cover for complete information on ROM Backup Service.**

[a] This version of SideWinder does not include any of the SideWinder utilities.

[b] Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk. It is functionally equivalent to PrinterTalk for most applications.

# Our Products and Services in Brief

## Carbon Copy Plus

For Portable Plus and Portable Vectra: a highly rated program that does both data communications and remote control (for operating a remote computer from the keyboard of a host computer). The data communications functions are among the easiest to use on the market. "Dual chat" windows allow local and remote users to type at the same time without garbling messages. The remote control functions are password protected to prevent unauthorized use of remote computers. The entire program is memory-resident. Specify Portable Plus or Portable Vectra version.

See P. 39

## CompuServe Starter Kit

Gets you started on the Electronic Information Service, CompuServe (which includes the HP Forum). Includes $25 worth of free time, and CompuServe's monthly magazine, Online Today.

## Condor 3 and Condor, Jr.

Database programs customized for the HP Portables. Enter data, sort, search, manage files, and print address labels with ease. **Condor, Jr.** runs on the HP110 and Portable Vectra. It allows limited report writing, and is highly memory-efficient. **Condor 3**, runs on the Plus, Portable Vectra, and HP150. It is a fully "relational" system, allowing you to combine data from two or more files. It includes advanced report generating capabilities, data transfer to and from Lotus 1-2-3 and other applications, and much more.

## Disk Conversion Service

We will convert your data to and from single-sided, double-sided, high-density, 3½ inch and 5¼ inch formats at a reasonable cost.

See P. 17

## DOS Tools: Portable Utilities Disk, Vol 1

Well over 50 excellent public domain programs that enhance DOS, all tested on The Portables. Documentation has been rewritten for clarity and ease of use, and includes examples, index, and table of contents.

See P. 9

## Duette

A software program that lets you transfer files back and forth at high speed between your HP portable computer and an IBM PC or compatible desktop computer—without the need for an HP-IL card. **Duette 2.0** is for the HP Portable Vectra. **HPDuette** is for the Portable Plus. Each version comes with proper serial cable.

See P. 25

## The Editor/The Formatter (separate packages)

**The Editor:** Many features not in MemoMaker, including search/replace, editing 2 files at once, embedded printer codes, up to 255 columns per line. Also does word wrap, right justify. Easy to use. Uses less than 40K. Versions for HP110, Plus, HP150, Vectra, and IBM PC all on master disk.

**The Formatter:** Sophisticated text formatter for large reports, program documentation, etc. Multiline headers, footers, page numbers, table of contents, glossary capabilities, and more. Works with almost all printers. (Note: Manual is in draft form: no technical support available.)

See P. 38

## HP9114 Empowerer

A hardware product that prevents the HP9114 disk drive from running out of juice in the middle of your work. Plug Empowerer into your HP9114 and a normal wall outlet, and you can run your HP9114 forever.

## Flowcharting II+

This program creates professional-looking flowcharts and organizational charts using 26 flowchart symbols in 95 sizes. Wide variety of text fonts for creating labels both inside and outside the shapes. Easy to add and delete lines without disturbing the rest of the flowchart. "Shrink Screen" feature lets you view up to 14″ × 11″ chart on 25-line screen. (Runs on Portable Plus only.)

## HPrint

Takes text (ASCII) files you've created with MemoMaker, The Editor, or other word processors and prints them on an HP printer. Comes with italic type font for ThinkJet. Also allows bold, underline, compressed, expanded, subscripts, superscripts, headers, footers, page numbering, double space, and much more—all of which you specify from a simple menu or by means of sensible control codes. HPrint also does mail merging, and it lets you create your own graphic characters (integral signs, Greek alpha, etc.).

## LINK HP-IL Connector Software

A software program that lets you transfer data from any HP-IL device to any other HP-IL device. Now you can access your main computer (HP Portable, HP150, or IBM PC), its unlimited storage capability, and all its peripherals from your HP41, 71, 75, or series 80 hand-held!

## Logitech Mouse for the Portable Plus

A 3-button mouse for the Portable Plus, bundled with our proprietary Portable Mouse Software and special connecting cable. Using the mouse instead of arrow keys to move the screen cursor makes using your Plus easier and more fun. The Logitech mouse was rated Editor's Choice by PC Magazine.

## 101 Macros for Lotus 1-2-3

Useful in themselves and also as learning tools for novices and experts alike, these macros include: recalculating ranges, double spacing spreadsheet prior to printout, hiding notes next to data cells, addressing form letters, and printing labels automatically. Customized for Lotus 1A and Lotus 2.01.

## Mobile Recharger

Lets you recharge your Portable, ThinkJet, HP9114, HP hand-held computer, etc. from your car's cigarette lighter.

See P. 5

## The Norton Utilities —Customized For The Portables

Allow you to recover deleted Portable files and organize your electronic and external disks. Peter Norton has authorized Personalized Software to include an extra 3½″ disk (formerly available only on 5¼″ disk) with each package sold. The disk includes The Norton Utilities, and instructions for running The Norton Utilities on the Portables and the HP150. Both version 4.0 and the Advanced Edition are now available.

## 1987 Portable Paper Subscriber's Disk

Includes (1) DISKPACK, a disk-packing utility whose commercial equivalent sells for $50. (2) Time Manager's Calendar Utility. (3) HP Calculator program. (4) C Drive Copy Utility. (5)Game and Lotus templates. Clear instructions are included right on the disk.

## 1988 Portable Paper Subscriber's Disk

Contains: (1) New utilities for Time Manager, including an expanded Calendar program and an automatic mail-merge utility. (2) Some of the best public domain software and "shareware" for the HP Portable Vectra. (3) A password program to protect usage of the HP110 Portable. (4) TERM xmodem program for the Portable Plus. (5) Lotus templates. (6) Games. (7) New DOS tools. (8) A file to toggle HP and Alternate mode from DOS. (9) Lots more. Clear instructions are included right on the disk.

See P. 18

## Power Cube

Powers and recharges up to four HP devices (HP Portable, ThinkJet, HP9114, HP hand-held, etc.) from a *single* wall outlet.

## PrinterTalk and Format110: MemoMaker Enhancers

**PrinterTalk** lets you change type styles in the middle of a document, change number of copies and lines per page, do automatic page numbering, and much more. **Format110** lets you format headers, footers and page numbers; chain or merge documents; compensate for "widow" and "orphan" lines and much more.

## Private File

Protects your letters, documents, and data files by scrambling your file so only you can understand it.

## 3 Project Management Packages

All 3 work on the HP110, Plus, Vectra, HP150, and IBM PC. **Project 8-9-10**, a Lotus template, helps you manage small to medium projects. **Milestone** is also for small to medium projects. (On HP110, you need to scroll to see entire Milestone screen.) **Pertmaster** is for medium to large projects (specify which machine).

*See center spread* **2-Megabyte RAM card**

A giant leap in memory size for the Portable Plus. Simply remove your existing RAM drawer and replace it with this card. Works with any Portable Plus with 512K of built-in memory. We will accept your old RAM drawer and any extra memory as a trade-in towards purchase.

*See center spread* **RAM/ROM Card**

A megabyte of RAM plus four pairs of ROM slots. Add the RAM/ROM card to your Portable Plus and you have a megabyte of extra RAM in addition to space for Lotus, Reflection, Webster's Spelling Checker, MemoMaker/Time Manager, and SuperROM (5 products on one ROM chip). We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase.

*See P. 10* **RightWriter**

Flags errors in grammar, style, usage, and punctuation, inserting comments directly into your document. Also produces overall critique (strength of delivery, use of jargon, grade level). Works with most word processors. Also available: **RightWords** dictionary extension utility: it has 7 auxiliary dictionaries (business, computers, engineering, etc.), and also lets you add words of your own to RightWriter's built-in dictionary.

*See P. 2* **Software on ROM**

Many of our best-selling programs are available on ROM chips via our ROM Backup service. (Portable Plus only.) Saves valuable electronic disk space, minimizes need for disk drive. **Custom ROMs** also available.

*See P. 27* **Shelp**

From within almost any program, Shelp gives you immediate access to a notepad and calculator and lets you define up to 26 keyboard macros—that is, assign up to 31 characters to a single keystroke. Written exclusively for the Portable Plus.

*See P. 13* **SideWinder**

This program allows you to print your spreadsheets (or any other text file) sideways on your ThinkJet. This means you can print your 60 column by 53 row spreadsheet from your Portable as one long printout without cutting and pasting.

*See P. 37* **Sketch**

A graphics program for the HP Portables. Lets you draw free-form using cursor keys. Also draw lines, boxes, circles by pressing a single key. Five character sets can be displayed normally, sideways, or even upside-down. Entire screen can be printed on ThinkJet at virtually any enlargement. Screens can be saved for future use. Screens can also be imported into Sketch from Lotus and other programs. Only uses 44K of memory.

## Soft Padded Cases

Roomy, rugged, high-quality, highly padded cases to protect your ThinkJet, HP9114, and HP Portable when traveling.

## Statistix

A comprehensive statistical package that's easy to learn and use. Runs on the HP110, Portable Plus, HP150, and IBM PC compatibles. Data can be entered from keyboard or imported from spreadsheet or database files. Includes multiple regression, most standard parametric and non-parametric tests, p-values, plots, histograms, and much, much more.

## Tiger Fox

A great video game of changing mazes and double pursuit. First video game designed for the Portables.

## Time Manager

The highly acclaimed Portable Plus ROM-based **Time Manager** program in a 3½"disk version for the HP110 Portable. Does not run on Portable Plus. (Available to Portable Paper subscribers only.)

*See P. 7* **T/Master and T/Maker**

**T/Master** is a fully integrated word processor, speller, relational database manager, spreadsheet, file manager, and communications package. Also includes graph making. It runs on the Portable Plus and Portable Vectra without modification, and on the HP150 with a PC emulator. **T/Maker** is an earlier version of T/Master; it runs on the HP110 Portable with an external disk drive. T/Maker does not include the communications module. Both programs are more integrated than any other package on the market. Our reviewer says, ". . . there is no other application I know of that matches the power, thoroughness, and simple elegance of T/Master."

*See P. 33* **Borland Turbo Pascal —Customized For The Portables**

Turbo Pascal, the HP Portable programming language of choice, outstrips others in price, performance, compatibility, memory consumption, and programmer environment. The WordStar-type editor alone is worth the price. Borland has authorized Personalized Software to include an extra disk customizing the Turbo editor to the HP110 and Portable Plus's editing keys. The **Turbo Pascal Starter Kit** includes **Turbo Pascal, Turbo Pascal Tutor 2.0** , and **Portable Pascal Programs** (a double-sided disk with more than 50 program examples for the Portables). Also available: **Turbo Toolbox** (includes Pascal sort and search routines that create database/file-management system).

*See P. 14* **Typing Whiz**

Better than almost any typing tutor program on the market—designed specifically for The Portables and the HP150. Immediate numeric and graphic feedback of your progress.

*Inside front cover* **Used HP Portable Equipment**

**The Portable Equipment Exchange**, a division of Personalized Software, buys and sells used HP Portables, Portable Pluses, HP9114s, HP ROMs, and RAM drawers for the Portable Plus. Because of HP quality, used HP products are a great buy. 30-day return policy on all used equipment we sell.

*See P. 1* **Volume Discounts**

Corporate buyers, users groups, and HP dealers: Order products and subscriptions from us in quantity and save.

*Back cover* **Webster's Spelling Checker**

Rated Editor's Choice by PC Magazine, this spelling checker packs a hefty 110,000-word dictionary into just 207K of disk memory. Webster's shows you incorrect spellings in context and suggests corrections, also lets you preview questionable words before you edit. Exceptionally easy to learn and use. Customized for the Portable Plus and HP150.

*See P. 29* **WordPerfect 4.2**

Disk based Portable Plus, Portable Vectra, and HP150 version of the best-selling word processor. Includes spelling checker and thesaurus.

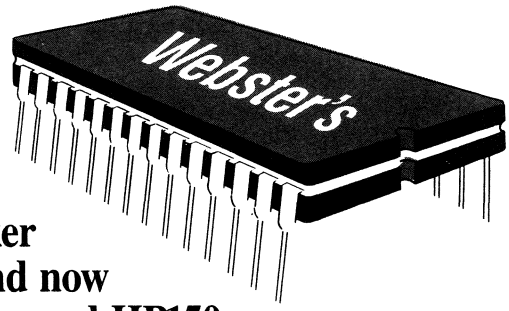
## The Word Plus

An excellent spelling checker with a choice of two dictionaries—45,000 words and 35,000 words— plus the ability to input additional words and abbreviations of your own. Also does word counts. Customized to the HP Portables.

*See P. 27* **WorldPort Portable Modems**

The **WorldPort 2400** is a battery-powered, highly compact (4" × 2" × 1"), lightweight (6.5 oz.), full-featured external modem that transmits data at 300, 1200, and 2400 baud. Faster than HP's internal modems, the WorldPort 2400 is fully compatible with the industry-standard Hays AT Command Set, and with both the CCITT and Bell communications standards. The **WorldPort 1200** modem transmits at 300 and 1200 baud.

# Portable Plus users: At last! A great spelling checker available on ROM!




## Webster's (web'stərs) n. The spelling checker rated Editor's Choice by *PC Magazine* (Dec. 24, 1985), and now available from Personalized Software for the Portable Plus and HP150.

—Customized on 3½" disk by special arrangement with Simon & Shuster, Inc.

*PC Magazine* rated eight leading spelling checkers for ease of use, flexibility, speed, overall program size, thoroughness, and accuracy. WEBSTER'S NEW WORLD SPELLING CHECKER came out on top—for a number of good reasons:

First, there's sheer size. WEBSTER'S contains over *110,000 words* in its dictionary—five times the number in Hayden's Speller, 2½ times as many as in The Word Plus—yet WEBSTER'S dictionary and main program take up only 207K of disk memory.

Second, WEBSTER'S isn't just easy to use—it's positively a *pleasure.* It reads your files at high speed, then displays every questionable word *in context*, highlighted. At the same time, in a "window" off to the side, it gives you a list of possible correct spellings. A simple menu gives you the following options:

- Accept the word as is
- Replace the word with one of the suggested spellings
- Enter the correct spelling manually
- Add the word to an auxiliary dictionary of frequently used words
- Replace all other occurrences of the word
- Look up the spelling of any other word at any time

WEBSTER'S also lets you mark in your text any spelling corrections that change length of a word; this lets you quickly locate portions of text that may need reformatting.

WEBSTER'S will automatically locate double repetitions (like "and and"). It can correct transpositions ("itme" becomes "item"), missing apostrophes ("dont" becomes "don't"), and *typos* of all kinds ("spellling" becomes "spelling," etc.).

If you're not sure of a word, you can even *spell it the way sounds*, and chances are WEBSTER'S will supply the correct spelling. ("Fenomenon" gets corrected to "phenomenon," for example.)

In addition, WEBSTER'S will let you preview a list of all questionable words *before* displaying them in context; this saves you time because it lets you eliminate words from the questionable list (or add them to your auxiliary dictionary) before you begin the editing pass.

John Dvorak, writing in the *San Francisco Examiner*, called WEBSTER'S "the best spell-checker we've seen in a long spell." Henry Kisor of the *Chicago Sun Times* has called WEBSTER'S "the best proofreading software on the market." We agree with them both—and we think you will too. Order your copy at no risk today.

| RECOMMENDED FOR: | | | |
|---|---|---|---|
| HP110 Portable | | Portable Vectra | • |
| Portable Plus | • | HP150 | • |
| IBM PC and compatibles | | | • |
| Available on ROM Backup for the Portable Plus | | | |

**Webster's Spelling Checker on 3½" disk customized for the Portable Plus and HP150 . . . . . $79.95**
**$69.95 for Portable Paper subscribers.**

**Webster's is available on ROM backup for an additional $179. See ROM ad in this issue for important details.**

**WEBSTER'S SPELLING CHECKER works with any file produced by the Editor, WordStar, and MemoMaker. It also works with ASCII files produced by MS Word and Word Perfect.**

**Our version of WEBSTER'S includes a customized 3.5" disk and simple instructions for running the program on the Portable Plus and HP150. A special utility allowing WEBSTER'S to run on the HP150 is included on the disk.**

**60-DAY MONEY BACK GUARANTEE**
*See order form for details.*

**TO ORDER**

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
**Personalized Software**
P.O. Box 869, Fairfield, IA 52556 515/472-6330

The Portable Paper
Personalized Software
P.O. Box 869
Fairfield, Iowa 52556

BULK RATE
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FAIRFIELD, IA
PERMIT #218

**HP Portable users:** Sorry, WEBSTER'S won't run on the 110; your best bet is THE WORD PLUS, another top-rated spelling checker available from Personalized Software.

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